

INFO/soft

WORLD STANDARD CHARACTER GENERATOR

NTSC • PAL • SECAM

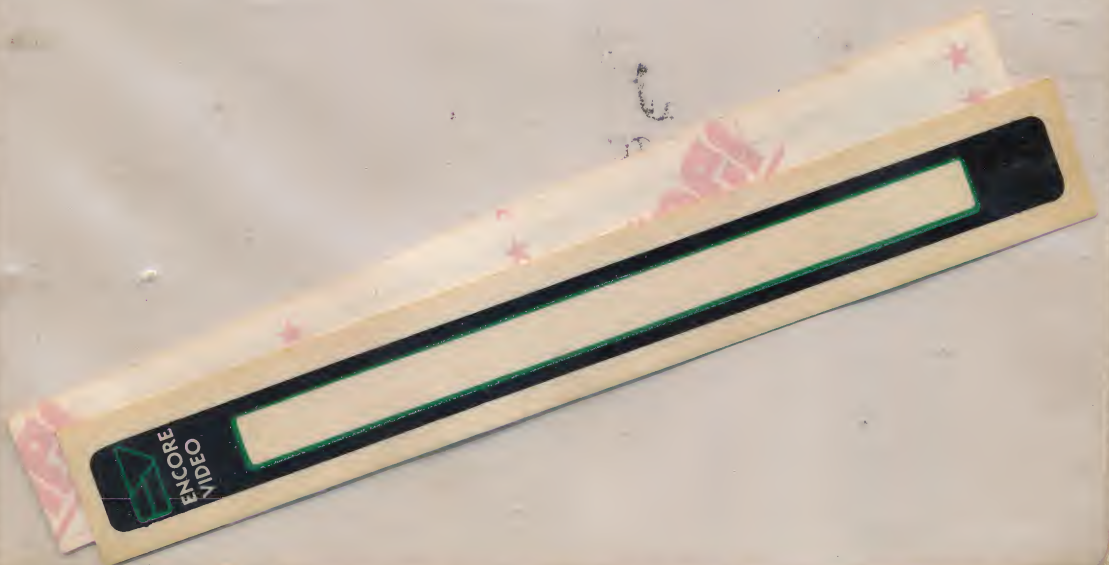


Information Display & Communication Software

INFO/soft 3000 CARTRIDGE

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envelope. If you do not agree, return the
Entire product to your dealer for a refund.

SERIAL #: T - 6123





*Cartridge Character
Generator for Atari
Microcomputers*

**INFO/soft
3000, 5000 and 7000
Display
Systems**

Second Edition (April 1988)

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SECTION 1.

INTRODUCTION & OVERVIEW

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HOW TO USE THIS MANUAL

This manual has been carefully prepared to help you get the most out of the INFO/soft Video Display system. Its six sections present a complete reference guide to installation and operation of the software, plus many ideas for applications.

Section 1 is an Introduction and Overview of the INFO/soft 3000, 5000 and 7000 software and its applications.

Section 2 deals with the initial Set-Up including hardware selection, installation and initial configuration of the 'System Disk'.

Section 3 is the Operator's Guide providing detailed information on various features and functions.

Section 4 shows you how to make use of the superb graphics on the INFO/soft 5000 and 7000.

Section 5 outlines some of the options that can be added to your INFO/soft Video Display software. As you add these options, we have left enough room so that you can place their instruction manuals in this section.

Section 6 is the Appendix. It contains a wealth of information on the hardware, protecting memory with batteries, specifications and a copy of the Warranty and License Agreement.

The best way to learn how to use your new INFO/soft display system is to try it! Experiment. Trying out ideas will help you answer a lot of your questions, while enhancing your experience and confidence.

One final point, All INFO/soft software is designed to be very easy to use. Just press the 'HELP' key on the computer and a handy reference screen will appear. You will probably find that you will not need to refer to this manual initially. But, it contains a wealth of information on some of the more advanced features of the software and you will want to refer to it after you have become familiar with the basic operation.

AN OVERVIEW OF INFO/soft VIDEO DISPLAYS

INFO/soft Video Displays were designed to be very easy to use. In fact, while we provide this rather extensive manual, and hope that you use it to get the maximum benefit from this remarkable product, we designed this software to be used without a manual at all!

The software is actually packaged in two forms. In fact, it is unique in the industry. A cartridge contains all of the standard features and functions. But, it has been designed in such a way as to permit expansion. These expanded features are loaded from the 'System Disk'. With the INFO/soft 3000 and 5000, it is not necessary to use this disk; the cartridge is a self-contained unit by itself. But, use of a disk drive provides the user with many more features and, of course, disk storage for pages which have been created. The INFO/soft 7000 does require a disk drive.

To make this a 'World-Class' product, our engineers designed the software to work on all three World TV standards - NTSC, PAL, and SECAM. Simply plug the cartridge into the appropriate version of Atari computer and the software will configure itself to operate on that TV standard!

INFO/soft 3000, 5000 and 7000 were designed for maximum video stability and quality. They were not designed for overlaying titles on video. This would have compromised the video quality of the product leading to the horrible character jitter and edge-crawl found on many other character generators.

DIFFERENCES BETWEEN THE 3000, 5000 and 7000

INFO/soft 3000 software is limited to 40 pages of memory, and has NO graphic character sets. It is designed for TEXT ONLY applications. INFO/soft 5000 has a full 120 pages of memory and three additional graphic character sets. Pages created on an INFO/soft 3000 can be transmitted directly to an INFO/soft 5000 equipped system. However, care must be taken when creating pages on an INFO/soft 5000 for use on the INFO/soft 3000. Page numbers should remain between 1 and 40, and only character sets 1 and 2 can be used, since the graphic sets are not available on the INFO/soft 3000. Otherwise, the features and functions are identical.

The INFO/soft 7000 is used with an Atari 130XE computer and an appropriate disk drive. It has a HIGH RESOLUTION graphic mode which will provide 40 pages of standard character graphic/text pages and 8 pages of high resolution graphics. It maintains some downward compatibility with both the INFO/soft 3000 and 5000.

WHY ATARI?

One question often asked is, “Why did you choose Atari Computers?” In 1980, the originators of the company built a small cable TV system in California. Needing a character generator for a local origination public access channel, they searched the marketplace for one that had the features they needed. Plus, it had to be low cost, very reliable and simple enough to be used by inexperienced community volunteers. Disappointed by what was being offered by manufacturers, they set out to build their own. After looking at the feasibility of building one from the ground up, they discovered that microcomputers looked like a good base to build a software-based character generator. Why reinvent the wheel when someone else has already put millions into the hardware?

After a comprehensive study of the microcomputer marketplace, nearly all were eliminated because of poor video quality. Most micro's had very poor sync that caused the cable customer's TV set to roll. Nearly ready to abandon the project, they discovered Atari. Surprisingly, the video sync was nearly perfect and the quality of the video itself surpassed many commercial character generators that they had investigated.

Throughout the years since 1980, Atari computers have proven themselves to be extremely reliable, capable of 24 hour a day operation for many years. And, as technology has reduced power consumption and the number of chips within the machine, the reliability has increased even more! Plus, the price for these units has dropped dramatically. In 1980, a 48K computer sold for over \$900. In 1988, the same computer with more memory can be bought for under \$100. And, Atari has had a consistant history of tough quality control. They have even put their machines through heat and humidity testing normally reserved for military type equipment.

Quality, Reliability and Price are the reasons we based this product on the Atari microcomputer. We are constantly looking at new microcomputers and will provide a version of this software on other machines that can meet our tough standards.

TYPICAL USES IN VARIOUS INDUSTRIES

These products were originally designed for the Cable TV, SMATV, and Private Cable markets. But, as you look at the many and varied applications, you will quickly realize that INFO/soft™ display products are far from being common character generators. They are real communication tools that can solve a variety of problems in many industries! Because of their Ease-of-Use, Professional Features, and Low Cost, these products find rapid acceptance by operators and users alike.

GENERATING EXTRA INCOME

We realize that you purchased this product with a particular application in mind. But, we thought you would be interested in knowing how these displays are used in other industries. As you look at these applications, imagine how many organizations and businesses within your own community could use INFO/soft displays.

INFO/soft Technology has an exciting 'Value Added Reseller' program for companies and individuals interested in packaging INFO/soft products together with the computer equipment. If you are interested, please contact:

INFO/soft Technology, Inc.
V.A.R. Program
12345 Lake City Way, N.E.
Seattle, WA 98125

INTERNATIONAL COMMUNICATIONS

Because INFO/soft Video Display systems work with all 3 World TV Standards, messages and graphics created in one country can easily be transmitted via telephone line, or sent via floppy disk to another country without regard for the type of TV standard being used in that country! This opens many new applications particularly for organizations and companies having multi-national offices!

HOTELS/MOTELS:

Low cost displays are being used as in-house TV guides, promotion of guest services, and convention news and announcements, and advertising of non-competitive goods and services, particularly car rental agencies, airlines, banks and credit cards, nearby tourist attractions, etc. Often, a larger Hotel will use separate character generators for a 'Guest Information' channel, and a 'Convention News' channel, and perhaps a third for lobby display and advertising of shops located within the Hotel. With the optional VCR controller, video programs showing local attractions and advertising can be integrated into a 'Guest Information Channel'. And, the VCR remains under control of the INFO/soft display software.

APARTMENTS/CONDOMINIUMS

INFO/soft Technology displays are used on MATV/SMATV systems as an information channel for owners and renters. Reportedly, the use of such channels significantly reduces the time and cost associated with 'paper' versions of notices and announcements thus saving a considerable amount of money for landlords and property management companies.

HOSPITALS

INFO/soft Technology displays are being used for hospital announcements, staff announcements, patient education and the like. Hospital administrators prefer using a video information channel because it saves the cost of printing and distributing paper announcements and bulletins. This fits with the current trend in the healthcare industry toward the 'paperless' hospital. Initial indications are that electronic bulletin boards are more effective than the old style cork-boards, too.

Patient education programs can be inserted into this channel through the use of the optional INFO/soft VCR controller.

TRANSPORTATION FACILITIES

INFO/soft Technology displays are used for announcements of airplane, bus and train arrival and departure times; 'message boards' for paging applications; promotion of goods and services, such as frequent flyer programs, for those waiting on lines; and, advertising applications of all types.

CONVENIENCE STORES

Used for 'Point-of-Purchase' displays to announce 'unadvertised' specials, promote new items, etc. Particularly useful in Convenience stores as a 'Did You Remember...' reminder at the front counter. Most of the larger chains of convenience stores have marketing people located in a regional headquarters. Usually, they require a 'REMOTE' system that permits them to control the advertising message used at each store in the region, with absolutely no interaction required with local store employees.

DISCOUNT and DEPARTMENT STORES

Used as 'Point-of-Purchase' displays, TV department sales tool, announcement of 'blue light specials', etc. Often used throughout the store, sometimes using multiple displays. It functions to pull customers into lesser trafficked areas, promote applications for credit cards, financial services, and special sales. Often, larger customers require remote systems so that their marketing department can coordinate promotional displays from a central location.

SCHOOLS/UNIVERSITIES

Universities have become big users of INFO/soft Technology displays. These systems are being used on campus as Electronic Kiosks or Bulletin Boards. They are also finding wide use during registration times at Universities to inform students of class changes, or closures. Since many University campuses have their own intra-campus cable systems, these systems can be used for displaying announcements, too. And, the optional VCR controller lets program directors show special video tape programming on the channel.

INDIAN RESERVATIONS

In various parts of the country, many Indian Reservations have their own cable TV systems and use low cost character generators to display tribal announcements. In Tribal Headquarters that serve as community centers, displays are used as an electronic bulletin board for tribal announcements, community events, etc. Using remote systems, various tribes are able to put together Indian News services that distribute information about various activities over ordinary telephone lines, and display that information on various TV screens at Tribal Headquarters/community centers or on reservation cable TV systems.

GOVERNMENT OFFICES

Municipal, County, State and Federal governmental bodies have a need to communicate more effectively with their constituencies. Many have written into their Cable franchise agreements 'government access channels' that can be used for this purpose.

INFO/soft Technology displays, either remote or stand-alone versions, are low cost enough to be located in dozens, or even hundreds, of public buildings, military bases, hospitals, etc. They can be operated from a central location, or locally. Or, both.

MILITARY BASES/HOUSING

Military bases of all nations usually have a desperate need to communicate routine messages to their personnel. Many military bases already have Cable TV installations and can use additional character generator capacity for message channels. Likewise, INFO/soft Technology displays can be set up in gathering places such as eating areas, clubs, lounges, etc.

FACTORIES/CORPORATE OFFICES

Well run factories and corporate offices usually have well informed people! Communication, if well done, can do more for productivity than anything else. An INFO/soft Technology system, feeding multiple TV sets or monitors located throughout a corporate facility or factory, can act as an employee bulletin board. A few minutes per day of a managers time can be used to place announcements welcoming new employees, congratulating employees for excellent performance or new ideas, announcing openings and promotions, etc. Employees of large corporations should be encouraged to place their own announcements — perhaps to sell their car, or announce a garage sale. Monitors or TV sets are placed in cafeteria areas, lounges, locker rooms, — wherever employees gather during 'break' times.

BANKS AND OTHER FINANCIAL INSTITUTIONS

In recent years, Banks and other Financial Institutions have been allowed to offer an often overwhelming variety of services. Customer communication has become an essential ingredient to a healthy and viable institution. INFO/soft displays in lobbies, or at the head of waiting lines announce services, interest rates, loan sales, and many other promotions. With the proliferation of Automatic Teller Machines, so called ATM's, financial institutions find that they have fewer and fewer direct customer contacts — meaning fewer opportunities to expose their customers to their other services. Placing displays at the ATM provides the opportunity to provide new 'customer exposures', and increase their efforts to market various services.

MALLS/SHOPPING CENTERS

Regional malls and shopping centers are in head-to-head competition with one another. Malls have, in some areas, become the new 'cultural centers' of the community. Many are now striving to better serve the community with INFO/soft Technology bulletin boards that announce community, church and social events in their areas. Stores located within the shopping mall are eager to advertise within the mall itself in order to capture a larger proportion of the walk-by traffic. Well placed 'Kiosks' using large TV screens (25'') announce community events and store ads continuously. These kiosks are easy to change, extremely effective, and save a shopping center considerable amounts of money normally spent for printing and related costs.

TRADE SHOWS

With the need to reach attendees of trade shows as they pass by an exhibit booth, many companies have turned to INFO/soft displays. Flashing their 'show specials' or new products announcements on one or two 25 inch TV screens brings people into their exhibit. It increases the effectiveness of their booth personnel, and keeps potential customers in the booth if a salesman is temporarily busy.

GOLF COURSES, BOWLING ALLEYS, RECREATIONAL FACILITIES

In recreational facilities, people often must wait their turn. INFO/soft displays are used to list the names of those who are waiting to use the facilities, and the anticipated time that these facilities will become available. They might also suggest some diversions while the person or party is waiting.

MANY MORE APPLICATIONS!

These are just a few typical applications for the INFO/soft Technology, Inc. family of software cartridges. New applications are being found everyday.

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SECTION 2. SET-UP

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SOFTWARE SUPPLIED

The following is part of your INFO/soft package:

CARTRIDGE - Provides all of the normal functions of your INFO/soft display system. Plugs into the Atari Computer.

SYSTEM DISK - Provides space to store pages 1 through 40, Upper, Bottom and Crawl regions and miscellaneous other data. Also contains a series of 'X' commands that are used to expand the capabilities of the cartridge.

GRAPHIC DISK (5000 & 7000 Only) - A library of 80 graphics that can be used on the text/character graphic pages of the 5000 and 7000.

DISK #2/HI RES DEMO (7000 Only) - Contains 8 HI RES demo pages that can be loaded into a 7000 system. The reverse side of this disk contains some of the graphics used in the demo but without the added text.

PROMO DISK (7000 Only) - Contains 16 graphic logos of various cable TV programmers. Use these for promoting these services to you subscribers.

NOTE: You do not need to use the DOS diskette that came with your disk drive. The cartridge has its own 'DOS'.

COMPUTER AND DISK DRIVES

INFO/soft 3000 and 5000 software may be used with or without a disk drive. The disk drive provides page storage and some additional features not available with the cartridge alone. If you are using an ATARI 130XE computer, INFO/soft 5000 will provide 120 pages of memory. With other Atari computers, the INFO/soft 5000 provides 40 pages of memory. You may use a single disk drive. However, for 120 page systems, we recommend TWO disk drives for maximum convenience.

INFO/soft 7000 systems **MUST BE USED WITH AN ATARI 130XE COMPUTER** and **REQUIRE** at least one disk drive for editing and saving pages. However, you can use the '7000' without a drive at a remote site. In this case, the editing and storage is performed at the main office, and the '7000' at the remote site is used for display only.

Any Atari or Atari-compatible disk drive designed to work with the 800XL, 65XE or 130XE will work. For maximum reliability, data is stored in a Single Density format. Atari 810, 1050 and XF-551 drives, as well as Atari-compatible disk drives made by Astra, Indus, and Rana will work.

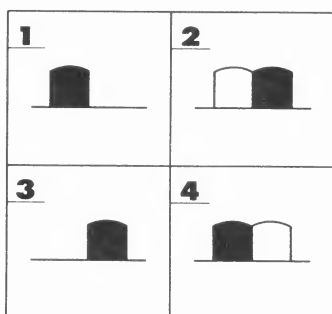
If you are using an INFO/soft 3000 cartridge, you will be limited to 40 pages of memory. One disk drive will take care of your storage requirements.

The use of a disk drive is recommended since it provides access to all of the features available within the cartridge.

SETTING THE DISK DRIVES

Be sure to set your disk drives to respond as 'Drive 1' or 'Drive 2' (if you have two drives). If you are using the Atari 1050 disk drive, be sure you have set the switches as shown below. This drive has some confusing switches that are easy to overlook. In the diagram shown below note that there is both a white and a black switch. These can be reached through a hole on the rear apron of the disk drive. Use a pen or pencil and slide the front of the switch to the right. You should see another switch immediately behind it. If you don't see it, you probably pushed both switches to the right. This is easy to do and causes much confusion. Try again.

Other models and brands of disk drives have other types of switches. Be sure to set up your first disk drive as DRIVE#1. If you have two drives, set up the second one as DRIVE #2.



INTERNATIONAL TV STANDARDS

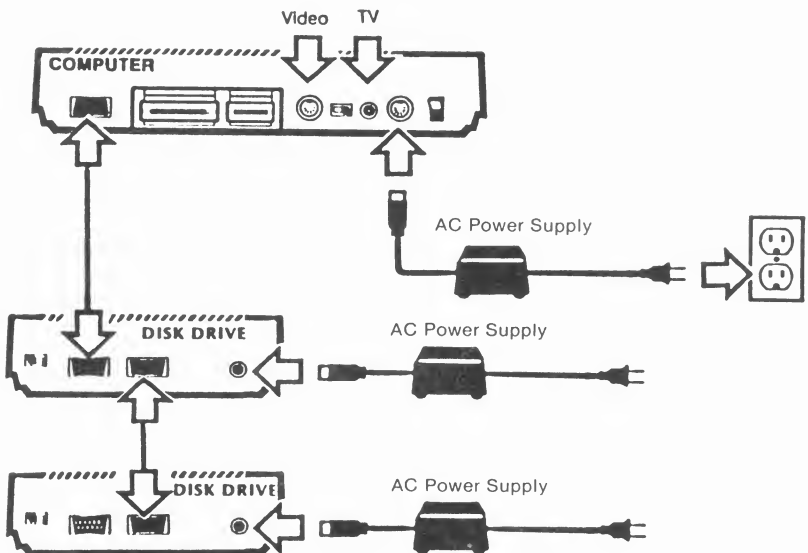
INFO/soft Video Display software will automatically detect the type of Atari computer used (they are available in NTSC, PAL-I, PAL-B, and SECAM versions) and adapt itself accordingly. With the 625 line PAL and SECAM versions, pages will have 20 lines instead of 16 with NTSC computers. All internal timing differences will be corrected automatically within the software. Pages can be sent from one system to another via telephone modem or one floppy disk without regard to the TV standard being used. All video signals are in a non-interlaced format for maximum stability and readability.

STAND-ALONE SYSTEMS

For stand-alone (NON REMOTE) applications connect your equipment as shown in the figure below. If you are using disk drives, be sure to set the drive numbers according to the instructions found in the disk drive manual.

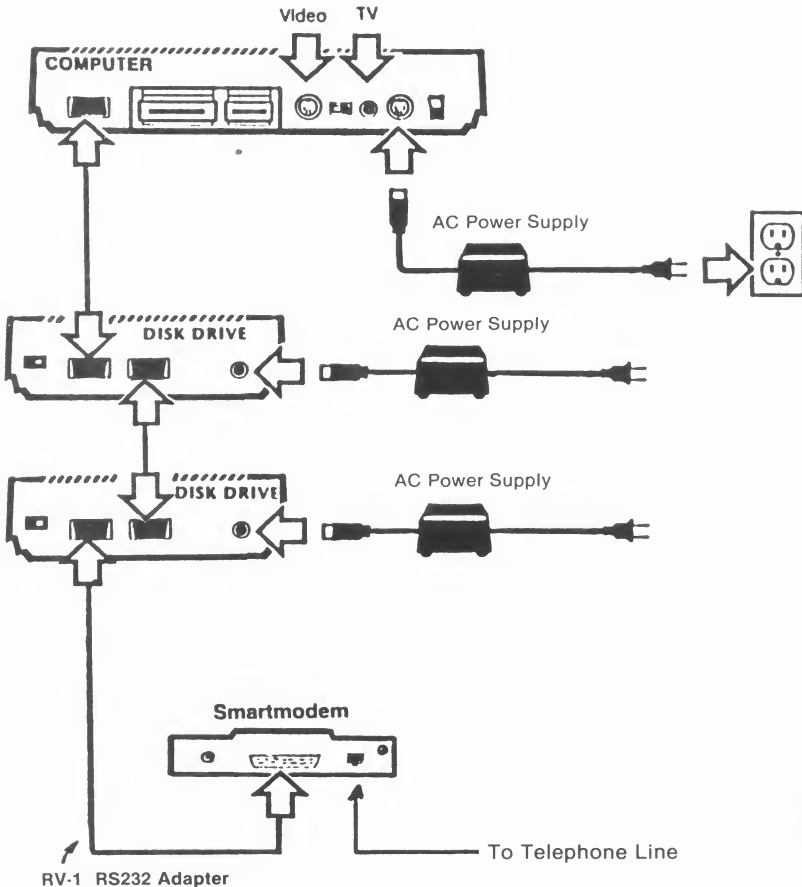
You may connect the 13 pin disk cable to EITHER of the two connectors on the disk drive.

PLEASE REFER TO THE APPENDIX FOR PIN CONNECTIONS IF YOU ARE CONSTRUCTING YOUR OWN VIDEO CABLE.



REMOTE SYSTEMS — OFFICE END

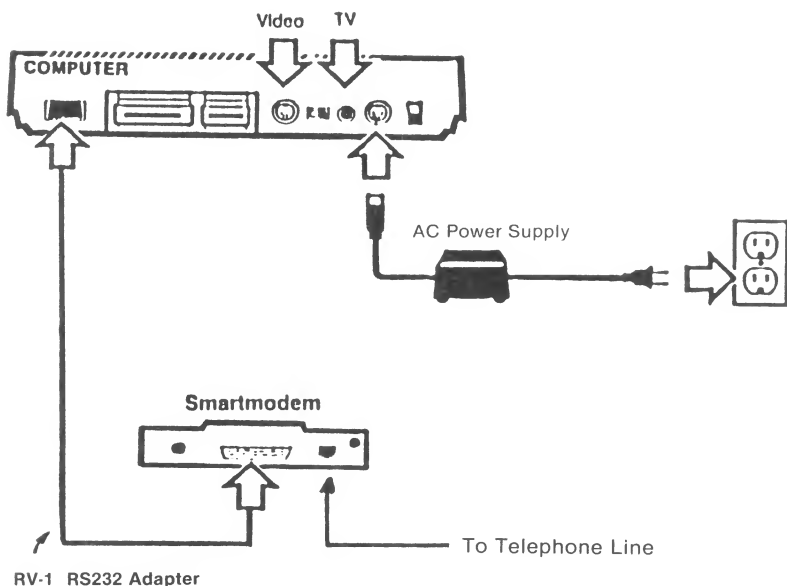
For remote applications, the equipment will be connected as shown. There will be little difference between the Headend (Distant) location and the Office location, except that the latter may need disk storage. PLEASE REFER TO THE APPENDIX FOR PIN CONNECTIONS IF YOU ARE CONSTRUCTING YOUR OWN VIDEO CABLE.



REMOTE SYSTEMS — HEADEND (Distant End)

The Headend generally does not need disk storage. However, a small battery backup as described in the Appendix may be useful if there are frequent power outages.

PLEASE REFER TO THE APPENDIX FOR PIN CONNECTIONS IF YOU ARE CONSTRUCTING YOUR OWN VIDEO CABLE.



MODEMS

INFO/soft 3000 and 5000 systems may use modems that are 100% Hayes compatible. These can be either 300 or 300/1200 baud units. For applications where small numbers of pages are to be sent to a remote location, we recommend the HAYES Smartmodem 300. This is an excellent unit. For larger volumes of pages or when using an INFO/soft 7000 system you will find that a 1200 baud modem is more suitable. Again, we recommend the HAYES 1200 modem. Before use, however, you **MUST** set an 8 position switch located behind the front panel. Refer to the figure below and remove the front panel. Next, set all of the switches to their **UP** positions, **EXCEPT** for Switch 4 and Switch 8 which should be **DOWN**. You may then replace the front panel.

We have also tested the lower cost AVATEX 1200HC modem, which costs less than \$100 and has been very reliable. It has the same type of configuration switches as the Hayes modems.

Again, make sure that the modem you purchase is 100% Hayes compatible. Be sure that it has a set of configuration switches to set various operational parameters.

INFO/soft 7000 cartridges may also be used with 2400 baud modems.

These Hayes modem switches perform the following tasks and are listed here in case you are using another 'compatible' modem.

SWITCH # -----FUNCTION-----

- | | |
|--------|--|
| 1 UP | DTR signal is computer controlled. |
| 2 UP | Verbose Mode. (Ignored by switch #3 setting). |
| 3 UP | Quiet Mode. No Result Codes or Phrases are sent to computer. |
| 4 DOWN | No characters are echoed back to Computer. |
| 5 UP | Automatically Answer Incoming Calls. |
| 6 UP | Carrier Detect signal activated. |
| 7 UP | Use with single line phone. |
| 8 DOWN | Sets the modem to respond to commands. |

A 'HAYES Compatible' modem MUST have these switches set appropriately, or it may not function correctly. Non-Hayes modems without these switches will probably not work correctly.



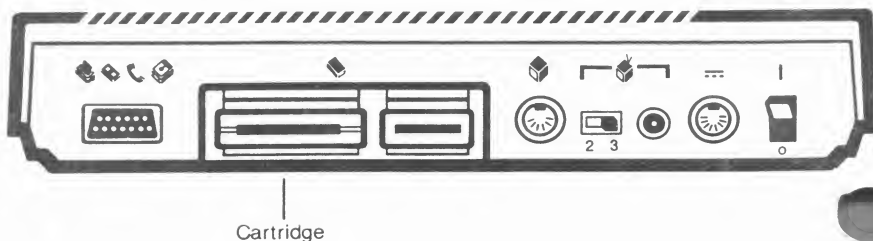
OTHER HARDWARE CONFIGURATIONS

Because of the inherent flexibility of the INFO/soft cartridges, several other possible configurations are possible. Among these are Multi-channel and Wire-line operation; application of background audio to the internal modulator; control of external devices, etc. Please refer to the Appendix for further information on these and other hardware configurations.

CARTRIDGE INSTALLATION

NOTE: INSERTION AND REMOVAL OF THE CARTRIDGE WHILE THE POWER IS 'ON' MAY CAUSE DAMAGE TO THE CARTRIDGE.

Before turning on power to your equipment, insert your INFO/soft Cartridge into the computer's cartridge slot. On an ATARI 65XE and 130XE, the cartridge plugs into the rear socket marked 'CARTRIDGE'. The label should be UP. On an Atari 800XL, this slot is located on top of the keyboard. Insert it through the 'trap door' with the label facing you.



DEMONSTRATION

Your System Disk is initially configured to load and display a series of demonstration pages. Simply place the system disk into the Disk Drive with the label facing up. Turn on the computer and within a few seconds the demonstration pages will appear. To terminate the display, press the 'BREAK' key or the 'HELP' key.

If you are using an INFO/soft 7000 with TWO disk drives, place 'DISK #2' into drive 2. If you have one drive, insert it when the computer asks you to 'INSERT #2 DISK'. Press any key to continue.

BACK-UP COPIES

The 'System Disk' includes a Disk Copy Program that allows the ORIGINAL LICENSOR to create backup copies of INFO/soft System Disks. Please remember that all INFO/soft software is copyrighted and protected by International, Federal, and State law. Unauthorized copies are prohibited, and each disk contains a serial number that allows us to trace unauthorized copies to the original purchaser. Please do not abuse this privilege. Cartridges cannot be copied. INFO/soft Technology, Inc. vigorously enforces copyright violations.

PLEASE! MAKE BACK-UP COPIES OF YOUR SYSTEM DISK!

PLACE THE ORIGINAL DISKETTE IN A SAFE PLACE AND USE YOUR COPIES. DAMAGED DISKETTES CAN BE REPLACED BY INFO/soft BUT THERE WILL BE A SERVICE CHARGE. BE SAFE — MAKE UP COPIES NOW!

MAKING A BACK-UP COPY

To make a DUPLICATE of your diskettes, insert the 'SYSTEM DISK' into Disk Drive #1. With the computer OFF, hold down the 'SELECT' key. Turn the computer ON while continuing to hold down the 'SELECT' key until the following appears on your screen:

Press [1] to Change Parameters
Press [2] to Copy Disks

Press [2] and the following screen will appear:

Insert ORIGINAL Disk in Drive 1
PRESS Any Key to Continue

(Please note that if you have two drives, you will be instructed to place the BACKUP copy into Drive #2.)

Insert the ORIGINAL disk (SYSTEM DISK, DISK #2, PROMO DISK, or GRAPHIC DISK) into Drive #1. Then, Press any key. The disk drive will light as data from the original disk is loaded into the computer. The computer will then ask:

Insert BACKUP Disk in Drive 1
Press Any Key to Continue

Insert your Backup disk. This can be a Blank disk right out of the box, or a disk that you have previously used. In either case, it will be completely erased and formatted before the copy is made. Then, press any key to continue.

If you are NOT using an ATARI 130XE, you can only copy one half of the disk with each pass. Therefore, the computer will prompt:

Not Done Yet
Insert ORIGINAL disk in Drive 1
Press Any Key to Continue

Reinsert your ORIGINAL Disk and press any key to continue. When the second half of the disk is loaded into the computer you will again be asked to insert your BACKUP copy. Do this and press any key to complete the copy process.

When the duplicate is finished, the computer will prompt:

DONE. No Errors
Press Any Key to Restart

For those using 130XE computers, the computer will ask whether you want to make another copy of the same original disk. Just answer the prompt by pressing 'Y'. Then insert a new blank disk into the drive and press any key to continue. With the 130XE, the entire original disk is still in memory at this point, so it is not necessary to reload it. Instead, the new blank disk is immediately formatted and a new **BACKUP** copy is made.

If for some reason, the computer encounters an error on the disk, it will terminate the copy process after making several attempts at fixing the problem. Try again using a new diskette. Be sure to mark the bad disk, so it does not find its way back into your good diskettes.

All copies are verified as they are made, so when a copy has been successfully made you can be assured that it is an exact duplicate of the original.

PLEASE NOTE: Some of our disks have data on both sides. You can copy 'Side B' by inserting the original disk into the drive with the label facing **DOWN**. But, you will have to use a new blank disk for the copy. Make sure that the blank disk is inserted with the label facing **UP**.

CONFIGURING THE SYSTEM DISK

The System Disk provides access to a number of unique features. It can be configured to load in languages other than English, load in extended commands that modify or add features to the software, or automatically reload pages and restart the display after a power failure has occurred.

To configure the System Disk, insert the 'System Disk' into disk drive #1. While **HOLDING DOWN** the 'SELECT' key, turn the computer **ON**. The screen will show the following:

Press [1] to Change Parameters

Press [2] to Copy Disks

Press [1] and the following screen will appear:

INFO/soft 3000 & 5000

[1] - English Only. Otherwise Program
Will Ask for Language Selection

Direct Load of Other Languages:

1 = German 2 = French 3 = Spanish 4 = Swedish

| 1 | 2 | 3 | 4 |
|-----|-----|-----|-----|
| [0] | [0] | [0] | [0] |

Load Extended Commands:

| 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|-----|-----|-----|-----|-----|-----|-----|-----|
| [0] | [0] | [0] | [0] | [0] | [0] | [0] | [0] |

[1] - Load All Pages and Regions

[1] - Jump Directly to Display Mode

[0] - Jump Directly to Editor

If Both are 0, Start in **HELP** menu

INFO/soft 7000

Direct Load of Language: If all 0's,
Program will ask for Selection.

| <u>English</u> | <u>German</u> | <u>French</u> | <u>Spanish</u> |
|----------------|---------------|---------------|----------------|
| [1] | [0] | [0] | [0] |

Load Extended Commands:

| <u>13</u> | <u>14</u> | <u>15</u> | <u>16</u> | <u>17</u> | <u>18</u> | <u>19</u> | <u>20</u> |
|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| [1] | [0] | [0] | [0] | [0] | [0] | [0] | [0] |

- [1] - Load All Pages and Regions
- [1] - HI RES mode for pages above 40
- [0] - Add Line Feed for Printer (1 = YES)

- [1] - Jump Directly to Display Mode
 - [0] - Jump Directly to Editor
- If Both are 0, Start in HELP menu

A '1' in any of the boxes indicates that the feature described has been selected. The sample above shows how we initially configure the System Disk so that it will load the demonstration pages and begin to display automatically.

Choose the 'English' option (as shown), OR ONE OF THE OTHER LANGUAGES FOR SYSTEMS SOLD OUTSIDE OF THE U.S.A. by placing a '1' in the appropriate box.

Extended commands (X-Commands) are used to add features to the cartridge and are explained in detail in Section 3 of this manual. For example, X-13 allows you to schedule pages. Each page can be made to turn ON and OFF at predesignated times throughout the month. If you want this feature to be loaded automatically each time the computer is turned on, simply place a '1' in the box corresponding to the 'X-13' Command.

If you are using a 7000 cartridge, place a '1' in the box that says: HI RES pages above page 40. This sets up the system to display high resolution pages. However, if you want to use your 7000 to display 120 text and character graphic pages, place a '0' in the box. This sets up the system to emulate the 120 page mode found in the INFO/soft 5000.

The next item is found on 7000 systems only. If you are using the X-11 function to print pages and your printer is NOT feeding the paper at all, put a '1' in the box labelled 'Add Line Feed for Printer'. This will signal the X-11 function to add an extra line feed as it sends data to your printer. (If you get an extra unwanted line feed on your paper and this box is already '0', you must turn off the auto-line feed function on your printer).

Toward the bottom of the screen, you will see a box for 'Loading Pages'. Place a '1' in the box and all of the pages and regions stored on the disk will load when the computer is turned ON. Place a '1' in the next box, marked 'Jump Directly to Display Mode', and your system will do just that. With '1' in both of these boxes, you can set up your system to automatically load and start displaying pages when the system is first turned on, or immediately after a power failure.

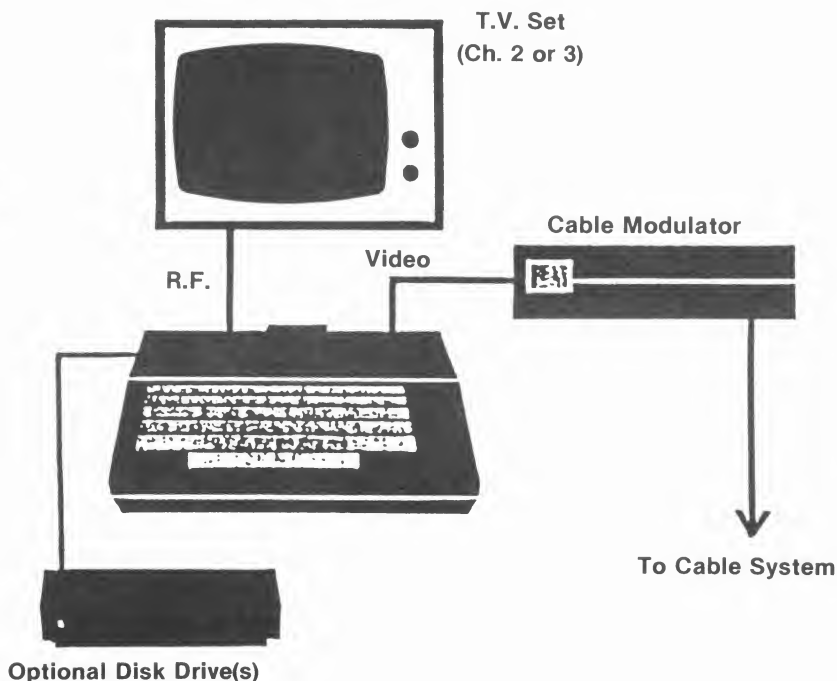
Finally, a '1' in the last box 'Jump to Editor' will cause the program to jump into the edit mode when the power is first turned on. If neither the 'Display' mode or the 'Edit' mode is selected, the program will display the HELP screen.

Use the Cursor keys to move around the screen. When you have made the appropriate choices, press the 'BREAK' key and these parameters will be saved on the disk for future uses. The system will then configure itself as indicated.

APPLICATIONS

CABLE TV/PRIVATE CABLE INSTALLATION

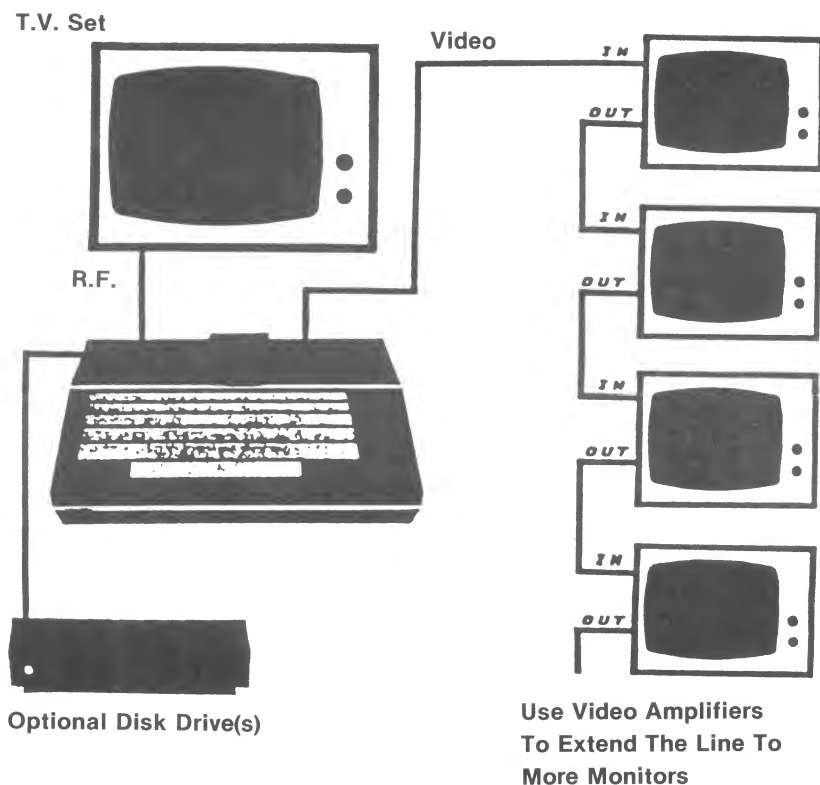
Connect the video output directly into a Cable TV modulator tuned to the desired channel. Use an ordinary TV set tuned to Channel 2 or 3 as a monitor. Or, if desired, use a monitor and 'loop thru' the video line with the monitor in the 'Hi-Z' position.



THE ELECTRONIC BULLETIN BOARD

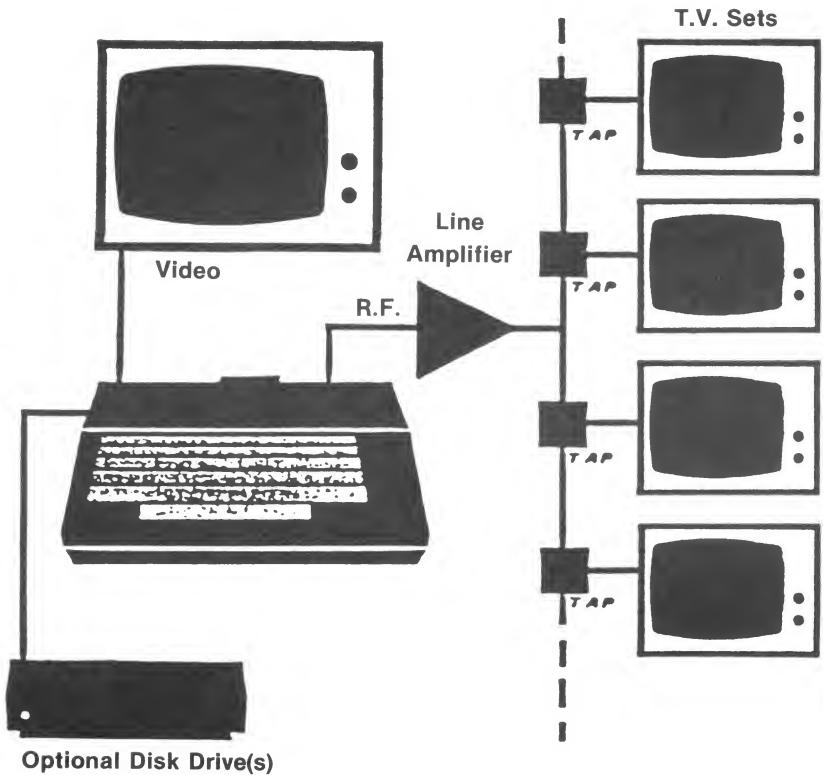
Electronic Billboards or Message Boards have wide applications in Hotel and Motel Lobbies, Convention Centers, Airports, Corporate Offices, Shopping Centers, Factories, Restaurants, Bus Stations, Retail Stores, etc.

Here is a typical layout using video monitors:



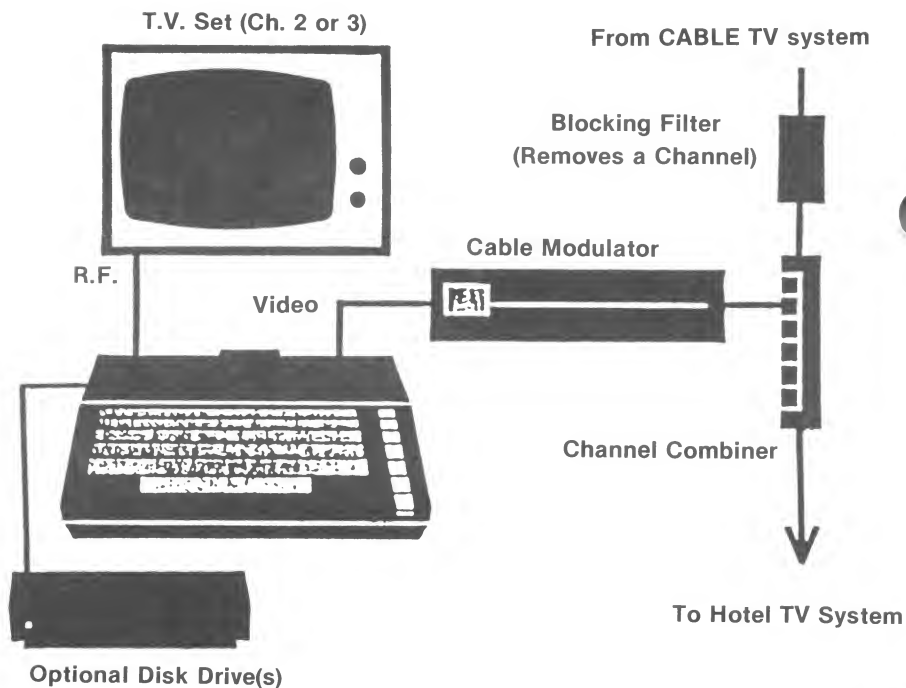
ELECTRONIC MESSAGE SYSTEMS

While video monitors provide the best display quality, sometimes it may be desirable to use ordinary TV sets. Here is a typical set-up for such an application. It is, in fact, nothing more than a miniature cable system. Amplifiers can be used to extend the number of TV sets and the distances as needed.



HOTELS/MOTELS WITH EXISTING CABLE TV

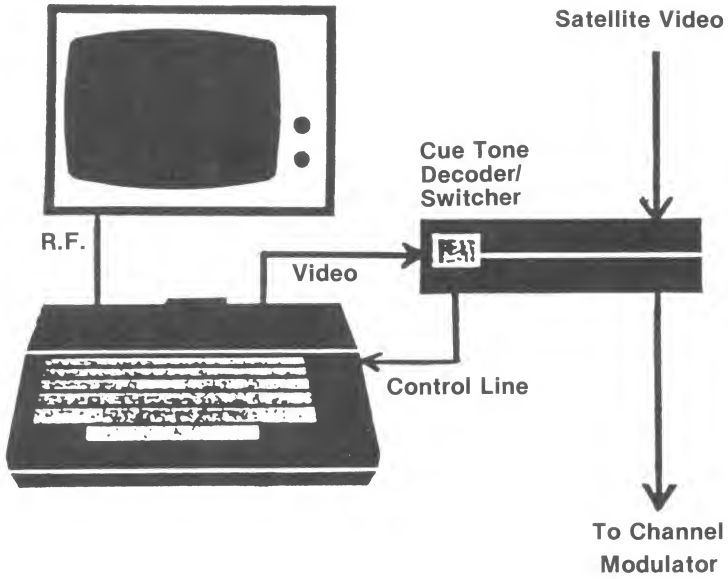
Many Hotels and Motels have Cable TV supplied from the outside. Often, there are no free channels on which to place a Message system such as this. However, a simple 'Blocking' filter can be obtained that will remove one channel and permit the Message channel to be inserted. A typical installation is shown below.



AD INSERTION

INFO/soft displays can be used in applications requiring insertion of graphic ads into satellite services like ESPN, CNN, MTV, etc. It can provide a video source that is controlled by an external cue-tone decoder/switcher. All that is required to externally control the INFO/soft display, is a contact closure, or logic LOW signal, that ties into the control lines coming out on Control Port 1 of the computer. Refer to APPENDIX 'A' - 'CONTROL PORT CONNECTIONS' for a description of these lines. For insertion applications, tie pins 2 and 3 together and connect them to your cue-tone decoder/switcher or other device. When a logic LOW, or contact closure to ground, is applied to these pins, the INFO/soft display will be blank and will remain in a paused state. As soon as a logic HIGH or OPEN contact is applied, the display will turn on and begin displaying pages normally. The cue-tone decoder/switcher decodes DTMF 'Start' and 'Stop' tones sent by the satellite service. Normally local advertising availabilities are 60 seconds to 120 seconds long with a 5 or 8 second preroll time allowed just prior to the start of the avail time. Information as to the exact cue-tone sequence and equipment needed can be obtained from the satellite service itself. Cue-tone decoders/switchers are available from a wide variety of manufacturers.

T.V. Set



A typical AD INSERTION installation.

USING CASSETTE STORAGE

On the 3000 and 5000, an Atari 410, 1010, or similar cassette program recorder may be used to store up to 23 pages of information. Because of limitations present in cassette systems, only pages 1 to 23, the Upper and Bottom Regions and the Crawl Region can be saved on the cassette tape. Other features, such as the 'X-tended Disk Functions' will not be available to the user when cassette-only storage is used. (See Section 3 - Operation).

To install the program recorder, simply plug it into the 13 pin I/O connector on the rear apron of the computer. If you are using the cassette program recorder in conjunction with disk drive(s), you can plug it into the I/O connector on the disk drive itself.

120 PAGE OPERATION (IS 7000)

You can operate your 7000 in 120 page mode similar to the 5000 cartridge. To do this on a system that has a disk drive, you must configure the system disk. Put a '0' (zero) next to the entry shown below:

[0] - Hi-Res Mode for Pages above 40.

To change a 7000 system without a disk drive (at a remote site), run a jumper between pins 1 and 8 on Controller Port #1 on the right side of the 130XE computer.

SECTION 3. OPERATION

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TURN-ON PROCEDURE

Install your Computer and Disk Drive (if you are using one) as shown in Section 2 — Set-up. Insert the Cartridge, and, if you are using a Disk Drive, turn it ON. Then, insert the 'System Disk' into Drive #1. Turn ON the Computer and within a few seconds the screen will appear.

There are several options available when using the disk drive, such as, loading languages other than English. Refer to Section 2 — Set-Up for more information on these options.

IMPORTANT!

If you are using a least one disk drive, you MUST have the 'System Disk' in Drive #1 WHEN YOU TURN ON THE COMPUTER or you will get a 'BOOT ERROR' message on the screen and the cartridge will not operate.

INFO/soft 3000 and 5000:

If you have a disk drive but do not want to use it, turn it OFF before turning the Computer ON. Later if you want to use it to load or save a page, press the 'Reset' key first.

INFO/soft 7000:

You should keep the disk drive on, otherwise the HELP SCREEN and PROMPTS will be blank.

THE KEYBOARD

Before beginning, refer to the following few paragraphs to see how various keys are used on the Atari keyboard. Note that many of the keys have graphic symbols, many more than are available on ordinary Atari computers. Therefore, you should ignore the symbols inscribed on the keys and refer to the manual for the correct graphic symbol.



Pressing this key displays instructions on the screen. Press 'Break' to resume editing a page.



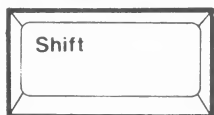
Used to begin the page display.



Used to select the Sequence — either random or numerical order. Only pages that are filled will be displayed.



On the INFO/soft 7000, used to select a numerical-order sequence. Pressing 'SELECT' alone selects a random sequence.

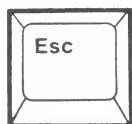




Pressing this key while in 'edit' changes the screen color. There are 16 background color options that can be chosen by this method. See 'X-1 Full Color Palette' for ways to choose any of 128 different colors.



Causes computer to reset and begin the program again. Page Memory will remain intact. Normally this key is not used.



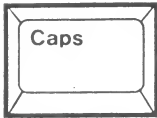
Used to select the various functions. Press this key once, then press the appropriate letter or symbol to perform a specific function. These functions can be referred to by pressing the 'HELP' key.



This key deletes (erases) the character to the left of the cursor and moves the cursor one space to the left. If you hold down the SHIFT key while pressing this key, the whole line will be erased and the remaining text will be moved up one line.



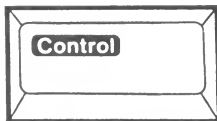
This key is used to 'interrupt' whatever function the computer is doing.



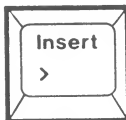
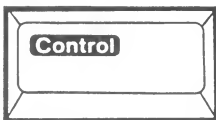
Shifts the screen into Upper/Lower case somewhat like a typewriter. Useful in Graphic Fonts 1 and 5, which contain Lower Case characters. In the other Graphic Fonts, 'CAPS' is used to select various graphic symbols.



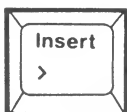
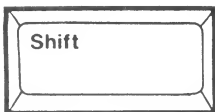
This key turns the INVERSE VIDEO mode on and off. After pressing this key, all subsequent keystrokes will appear in INVERSE VIDEO until it is pressed again.



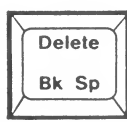
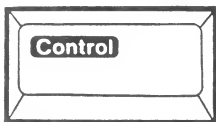
Always used in conjunction with another key. Prints graphic characters.



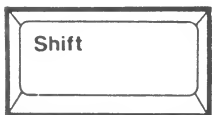
Inserts a space between characters.



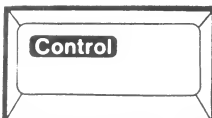
Inserts a LINE between text.
Moves remaining lines down.



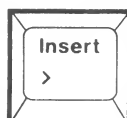
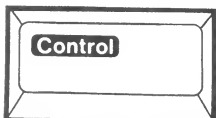
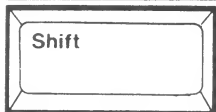
Deletes a character underneath the cursor and shifts the remaining characters on the line to close up the empty space.



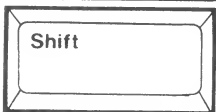
Erases an entire line and DELETE moves lines below the cursor UP one line.

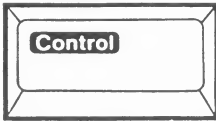


7000 only. Moves entire screen (from cursor position) one space toward the Right.

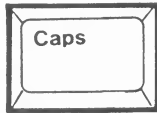
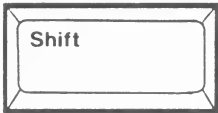


7000 only. Moves entire screen (from cursor position) one space toward the Left.

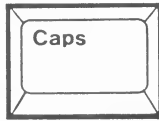
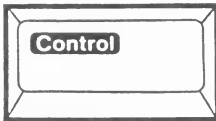




Moves the cursor around the screen.



Locks the computer keyboard into the Upper Case mode for Alphabet characters.



Locks the computer keyboard into the Control mode for convenient entry of some of the graphic symbols.

SCREEN REGIONS

The screen is divided into regions: Upper, Page, Crawl and Bottom. The bottom region has two parts: a fixed message and a date/time display. Each of the message regions can be changed as desired. Background color and Graphic character set is also changeable. Refer to the section that describes each region for more information.

FULL SCREEN DISPLAY

You may also select to display one or more pages in a FULL-SCREEN mode without the upper, crawl or bottom regions showing. To use this mode with an INFO/soft 3000 or 5000 cartridge, you must set up the System Disk configuration to load the 'X-18' command. This modifies the cartridge to display full screens. You will have 20 lines with 40 characters across in this mode. To set the page to 'Full Screen', press 'ESC' - '\$'. To return to a four region page, press 'ESC' - 'F'.

The INFO/soft 7000 cartridge has this Full Screen mode built into it. To set a page for 'Full Screen' display, press 'ESC' - 'F' (the normal page format command).

UPPER REGION

Enter the Upper Region by pressing the 'ESC' key followed by the 'U' key. The cursor will appear in the upper left corner of the region. Change the contents of the Upper Region as needed. To change the background color, press the 'OPTION' key, or use the 'X-1' command described elsewhere in this Section. If desired, you can use another Graphic character set by pressing 'ESC' - 'G'. Exit by going to another region.

The Upper Region is 'static'. It does not change, always appearing at the top of the screen.

As an option, you may order a special 'High Resolution' logo or design for display in this region. It can be loaded from disk, or on special order, it can be placed permanently in the cartridge. Please consult INFO/soft Technology directly for details and a quotation.

CRAWL REGION

To edit the Crawl Region, Press 'ESC' - 'C'. The entire crawl region will appear in the page area of the screen. Simply type in your crawl message. Do NOT add extra spaces at the end of the line. Words will appear to be broken up as you enter text, but will appear normally when displayed. Press 'OPTION' to change the color of the Crawl line. Exit by entering another region. Or, press 'START' to see how your crawl will look when it is displayed.

If you have an INFO/soft 7000 cartridge, you may change the size of the crawl line by pressing 'ESC' - 'F'. The prompt line will show the crawl size as Small, Medium or Large.

BOTTOM REGION

Enter the Bottom Region by pressing 'ESC' - 'B'. The cursor will appear in the upper left of the region. Change the display as desired. Change background colors with the 'OPTION' key, or use the 'X-1' command described elsewhere in this Section. Use 'ESC' - 'G' to change to another graphic character set. Exit by entering another region.

If you want to use double-height characters in this region, use Graphic Font 2.

Note: On the 3000 and 5000, the Date/Time display cannot be altered. It is normally displayed for 10 seconds, followed by a 10 second display of the bottom Region message. This feature allows the cable operator or Hotel/Motel manager to sell ad space in this area.

On the 7000, you can display the Date/Time region in Small or Large characters. Just enter the Time Region with an 'ESC' 'T'. Then press 'ESC' - 'F' to change the format. Watch the status line's 'Time' indicator.

If you wish to display only the Bottom region, eliminating the alternating Date/Time Region, you may do so by adding a wire jumper between Pins 7 and 9 of control port #1 (Joystick Ports) on the right side of the Atari computer.

TIME/DATE REGION

Enter the Time/Date Region by pressing 'ESC' - 'T'. Move the cursor over the displayed time and enter the current time. change the date if needed. When you press 'RETURN', the time will be set. The Time/Date should not need resetting unless a power failure has occurred. The internal clock is Quartz crystal controlled and should maintain a very high degree of accuracy. However, the clock speed may be adjusted through the use of the 'X-5' command described in this section under 'Xtended Disk Functions'.

The Date format is displayed as MM-DD-YY in NTSC systems and DD.MM.YY in PAL and SECAM systems.

If you wish to display only the Date/Time region, eliminating the alternating Bottom Message Region, you may do so by adding a 270K ohm resistor between Pins 7 and 9 of control port #1 (Joystick Ports) on the right side of the Atari computer. The resistor may be of any type and wattage.

If you are using an INFO/soft 7000 cartridge, you may choose to display the Date/Time region in Large double height characters. Just press 'ESC' - 'F' to change the format. The prompt line will show whether the Time line is in the Small or Large format.

PROMPT LINE

Whenever you need to enter a number, or need to do something, a message will appear in the Crawl region of the screen. This is known as the 'Prompt Line'.

STATUS LINE

The INFO/soft 7000 cartridge also displays certain key information when in the 'edit' mode. It shows the Page number, Graphic character set, and Dwell time of the Current page as well as the format for the Crawl line and Time/Date region. On the right side of this line there is an 'ABC' indicator which shows the current status of the keyboard, i.e., whether it is in Upper Case, Lower Case, Graphics or Inverse.

HELP SCREEN

If you should forget which command to use, press the 'HELP' key on the computer and a special help screen will appear. (If you have an older Atari that does not have a Help key, use the BREAK key instead!) You can check the Help Screen at any time.

STANDARD CARTRIDGE FUNCTIONS

AUTOMATIC TIMEOUT

An automatic timeout is built into the INFO/soft 3000, 5000 and 7000. If you should walk away from the keyboard while editing, and stay away for longer than 5 minutes, the cartridge will automatically put itself into the Display mode. This is done because many times an operator will be editing 'on-line', i.e., as the operator is editing the character generator is being viewed by cable system subscribers. Should the operator be called away, and forget to return, the subscribers would be left viewing that one unfinished page for hours or perhaps even days! With the automatic timeout feature, the cartridge is put into a Display mode whenever the keyboard has been left unused for 5 minutes or longer.

BACKGROUND COLORS

To change the color of the background, position the cursor in the region or on the page that you want to change. Then, press the 'OPTION' key. Each time you press this key, the background colors will change. There are 16 colors, or color combinations that can be chosen in this manner.

There are actually 128 colors that may be chosen using the 'X-1' Command function. (see this Section of the manual for instructions on 'X' functions and their use). We have chosen 16 of these colors and made them easy to choose by pressing a single key. The Small characters (Format 1) are either bright (white) or dark (black) on a solid color background.

The Medium and Large size characters (Formats 2 and 3) may appear in up to 4 different colors. They can also flash on and off for attention grabbing displays. See the sections: CHARACTER COLORS and FLASHING for more details.

CENTERING TEXT

To automatically center text on a line, move the cursor to the line and press 'ESC' - '/'. The line will be centered instantly!

CHARACTER COLORS

Screen Formats 2 and 3 use Medium and Large sized characters. You can choose either of two colors for these characters by pressing 'ESC' - '1' for color #1 and 'ESC' - '2' for color #2. After pressing these keys, all of the characters following will be in the color chosen. Note that the actual color will depend upon the background color chosen with the 'OPTION' key. If you want to select another color or color combination from the palette of 128 colors, you can use the 'X-1' command described elsewhere in this Section.

DELETING CHARACTERS AND LINES

To Delete a CHARACTER, position the Cursor over the character to be deleted. While HOLDING DOWN the 'CONTROL' key, press 'DELETE'. The character under the Cursor will be deleted and all of the remaining characters on the line will be shifted one space to the left.

To delete an ENTIRE LINE, position the Cursor on the line that you want to erase. HOLD DOWN the 'SHIFT' key and press 'DELETE'. The line will be deleted and all of the lines below the Cursor will move up one line.

On the 7000, press 'SHIFT' + 'CONTROL' + 'DELETE' simultaneously to delete one column of text under the cursor. The remaining text on the page is moved one character space to the left.

DOUBLE HEIGHT CHARACTERS

When you are in page Format 1 (40 characters per line), you may use Graphic Character set 2 to place double height letters on the screen along with the standard small size characters. This can be done in one of two ways. The easiest way is to use the 'X3' command described later in this section. Letters and numbers are automatically drawn on the screen.

If you are not using a disk drive, you can manually 'draw' these double-height characters. Actually, these letters are drawn in two halves. First, hold down the 'CONTROL' key and press the corresponding letter. You will 'draw' the top half of the desired character. Then, using the cursor 'arrow' keys, position the cursor underneath the top half of the desired character. Then press 'CAPS' once to place the keyboard into lower case mode. Then type the lower half of the character by pressing the appropriate key.

DWELL TIME

Each page can have a different dwell time. For example, each page can be independently displayed for a period of as little as 0 seconds (actually it is about 1/5 second) or as long as 99 seconds. Each page will automatically be displayed for 10 seconds unless you change it. To set another dwell time press 'ESC' - 'D'. A prompt will appear in the Crawl region asking you to enter a time from 0 to 99 seconds. Do so and remember to press the RETURN key afterwards. The new dwell time will then be recorded. By setting the Dwell time to 0 seconds and altering the page sequence, you can create animated effects which are very 'eye-catching'.

If you are using an INFO/soft 7000 cartridge, you will see the dwell time displayed on the 'Status Line' when you are editing the page.

ENTERING TEXT

Simply type your message just as you would on an ordinary typewriter. You can correct mistakes by pressing the BACKSPACE key or by moving the Cursor and typing over the mistake.

FLASHING CHARACTERS

In Screen Formats 2 and 3, the Medium and Large sized characters can be made to flash by first pressing either 'ESC' - '3' or 'ESC' - '4'. All characters typed in afterwards will flash when the display is started. The color of the characters displayed with the 'ESC' - '3' command is, in most cases, the same as those displayed with the 'ESC' - '1' command. In a few cases, these colors will vary. Sixteen color combinations are chosen with the 'OPTION' key. Or, you can create your own colors with the 'X-1' command described elsewhere in this Section.

FORMATS

There are three screen formats. Each format has a different size screen and a different character height and width. Change formats by pressing 'ESC' - 'F'. Each time you do this, the format will change. Depending upon the TV standard in use, the three formats have screen sizes as follows:

| FORMAT | -----NTSC----- | ---PAL & SECAM--- |
|--------|---------------------|---------------------|
| 1 | 16 Lines x 40 Char. | 20 Lines x 40 Char. |
| 2 | 16 Lines x 20 char. | 20 Lines x 20 Char. |
| 3 | 8 Lines x 20 Char. | 10 Lines x 20 Char. |
| 4* | 20 Lines x 40 Char. | 20 Lines x 40 Char. |

*INFO/soft 7000 Full Screen display. All others are 4 region Screens. Refer to 'X-18' or full screen display using INFO/soft 3000 and 5000 cartridges.

GRAPHIC CHARACTERS

INFO/soft 5000 and 7000 have five character fonts which contain over 500 graphic characters.

INFO/soft 3000 has two character sets with no graphic symbols (These are still called 'Graphic Sets' however). To choose a Graphic Character set, press 'ESC' - 'G'. The prompt line will indicate which Graphic Font has been chosen. (INFO/soft 7000 will also show you which Graphic set you are using on its 'Status Line'). Each time you press 'ESC' - 'G' the Graphic Font will change.

To choose a graphic character, hold down the 'CONTROL' key and press the appropriate graphic key. **See the diagrams in Section 4 - GRAPHICS for the position of each graphic key.**

NOTE: Some character sets have extra graphic characters in place of lower case letters.

HELP SCREEN

The Help Screen provides a quick reference for most of the common commands that you will be using. Just press the 'HELP' key on the computer and it will appear. If you have an earlier version of the Atari 800 computer without a Help key, press 'BREAK' for the Help Screen. The Help Screen can be loaded in five languages including English.

PLEASE NOTE: If you are using an INFO/soft 7000 at a remote site and do not have a disk drive attached and turned on, your help screen will be blank.

INSERTING CHARACTERS AND LINES

To insert a CHARACTER in a line, move the cursor to the desired position. HOLD DOWN the 'CONTROL' key and Press 'INSERT'. Each time you do this, the characters to the right of the cursor will be moved one space to the right. Then, type the desired character into the 'hole' that you have created.

NOTE: Characters can be pushed off the right side of the screen. They cannot be recovered.

To insert a BLANK LINE into the text, position the Cursor at the desired location. HOLD DOWN the 'SHIFT' key and press 'INSERT'. All of the text, from the Cursor down, will be moved down one line.



NOTE: Lines can also be pushed down off of the screen. If this is done, you may recover one line only (3000 and 5000 only). All others will be lost.

On the 7000, press 'SHIFT' + 'CONTROL' + 'INSERT' simultaneously to move the entire page to the right of the cursor by one space.

INTERNATIONAL CHARACTERS

Graphic Set 1 contains many international characters. These are displayed on the screen by HOLDING DOWN the 'CONTROL' key and then pressing one of the standard character keys. For a list of these international characters see Section 4 - GRAPHICS.

INVERSE VIDEO

To print characters in an Inverse video format, first press the  key. All characters typed will then be in a reverse or inverted video style. To return to normal, press the  key again.

LOADING FROM DISK

To load a page that has been saved on disk previously, press 'ESC' - 'L'. Enter the page number that you want to load and press 'RETURN', or simply press 'RETURN' if it is the same page number that you are currently using.

To load ALL PAGES from the diskette, press 'ESC' - 'SHIFT' - 'L'. Hold the SHIFT key down while pressing 'L'. Loading all pages can take several minutes depending on the number of pages stored on the disk.

To load ONLY the Crawl Region, Upper Region, AND Bottom Region, first enter any of these regions and press 'ESC' - 'L'. ALL THREE regions will be loaded from the disk.

If you are using an INFO/soft 7000 with a single disk drive, you will be prompted to insert 'Disk #2' when loading pages greater than page 40.

LOWER CASE LETTERS

To set the keyboard for both Upper and Lower case letters (In FORMAT 1 only) press 'CAPS' once. Lower case letters are available in Graphic Fonts 1 and 5. Graphic Fonts 2, 3, and 4 have extra graphic characters instead of lower case letters.

MILITARY (24 HOUR) TIME

To set the clock for 'Military' or 24 Hour time, press 'ESC' - 'M' once. Each time you do this the time display will change format (either 12 or 24 hours). The prompt line will indicate whether you are in 12 or 24 Hour format.

MODEM SPEED

For remote or multi-channel operation, you may select either 300 or 1200 baud speed by pressing 'ESC' - '#'. When your INFO/soft system is first turned on it will be in a 300 baud speed. The INFO/soft 7000 will be in the 1200 baud mode. However, you may add a simple jumper to one of the control port pins on the side of the computer so that it will be in the 1200 baud speed. Refer to the Appendix (see 'Control Port Connections - Pin 5') for further information about this jumper. The INFO/soft 7000 can also operate at 2400 baud.

PAGE EDIT

To get to the desired page, press 'ESC' - 'P' then enter the page number and press RETURN. The page will be displayed and the appropriate page number will be shown in the Crawl region.

PAGE UP/PAGE DOWN

While in edit, you can advance to the next page by pressing 'ESC' - '+'. To go back to a previous page simply press 'ESC' - '-'.

QUICK PREVIEW/VIDEO ARCHIVING

If you would like to run through the display without waiting for each page to display for its entire dwell time, use the 'Quick Preview' feature. Simply hold down the 'SHIFT' key and press 'START'. Hold the 'SHIFT' key down until the pages start displaying. Each page will be displayed for 1 second, regardless of its normal dwell time setting. Press 'BREAK' to stop.

This feature permits you to conveniently keep a 'Video Archive' of pages displayed day-by-day. To archive your display, record the 'Quick Preview' display on your VCR. Since a full 120 pages will be displayed in about 2 minutes, you will be able to archive 60 days of displays on a 2 hour Beta or VHS tape! Use the VCR's slow motion or pause controls to view the pages at your leisure. The Date/Time region on the bottom will provide an easy reference point as you search through a tape at high speed.

SAVING PAGES ON DISK

Pages, and regions can be saved either as a whole or individually on systems equipped with one or more disk drives. To save all memory (all pages, regions, sequencing, etc.) simply press:

'ESC' - 'SHIFT' - 'S'

Hold down the 'SHIFT' key when you press 'S'. To save an individual page on the disk, press:

'ESC' - 'S'

The prompt line will read:

SAVE: Page #, or RETURN for Current

If you are on page 1 and want to save it as page 1 on the disk, simply press RETURN. If you want to save Page 1 in page 20 of the disk, enter '20' and press 'RETURN'.

To save only the Upper, Bottom, AND Crawl Regions, place the cursor into any one of these regions (ESC - U, etc.) and press 'ESC' - 'S'. The three regions will be saved as a group.

If you have an INFO/soft 5000 with a Single Disk Drive, you can manually save pages 41 through 80 or pages 81 through 120 on separate disks. Go to page 41 and save it as 'Page 1' on the second disk. Then, save page 42 as 'Page 2', etc. Likewise, save page 81 as 'Page 1' on a third disk. This is very cumbersome, but it does work and may be useful in limited applications. Two drives are desirable.

If you are using an INFO/soft 7000 with a single drive, you will be prompted to insert 'Disk #2' when saving pages above page 40. You do not need a special diskette for saving these pages. Just insert a blank unformatted disk into the drive and the 7000 will automatically format it prior to saving the pages. Then, mark this diskette as 'Disk #2' and use it for subsequent storage.

SEQUENCING PAGES

Pages may be displayed in Numerical Order starting at Page 1, or Randomly in any order desired. If you do nothing, the display will start at Page 1 and proceed upward. Only pages which are not blank will be displayed. If, for example, you have messages on pages 1, 3, 5 and 21. The display will start on page 1, then jump to pages 3, 5 and 21. All other blank pages will be ignored!

On INFO/soft 3000 and 5000 cartridges, pressing the 'SELECT' key alternately selects 'RANDOM' or 'NUMERICAL ORDER' sequences. Watch the 'Prompt' line to see which you have selected.

On the INFO/soft 7000 cartridge, press 'SELECT' for Random sequences, and 'SHIFT' and 'SELECT' together for numerical order sequences.

If you want to choose a random page display press the 'SELECT' key. The Bottom Region will change to reveal a series of page sequence numbers. Move the Cursor and change the numbers to any sequence desired. Press RETURN to save the sequence. To abort without changing the sequence, Press the HELP key.

It may be easier to first clear the Bottom Region of the old sequence numbers before entering the new ones. Do this by holding down the 'SHIFT' key and pressing 'CLEAR'. The entire area will be cleared. Then, type in the desired sequence.

Sequence numbers may be entered in any of the following formats or in any combination:

- 1 2 3 etc. — Displays pages 1 2 3 only
- 1 - 20 — Displays pages 1 through 20
- (20-25)6 — Displays pages 20 through 26 a total of 6 times

As an example, the sequence could look like the following example:

1-20 (21-24)6 64 25-63

Pages 1 through 20 will be displayed, then pages 21 through 24 will be displayed 6 times, followed by page 64, then pages 25 through 63. The sequence will then repeat. This example, while complicated, illustrates the flexibility of random sequencing.

NOTE: UP TO 39 CHARACTERS CAN BE USED IN THE SEQUENCE, INCLUDING '(', ')', '-', BUT EXCLUDING SPACES.

NOTE: Blank pages should not appear in the display. If they do, it means that you either typed a character on a page and then deleted it without using 'SHIFT' - 'CLEAR' to clear the page, or you loaded a blank page from the disk. Both will tell the computer that the page has been 'filled' and should be displayed. To find out which blank page is displaying, use the 'Quick Preview' feature mentioned earlier in this section of the manual. It will display all 'filled' pages and their page numbers. Any blank pages can be cleared out by going to the appropriate page and by pressing 'SHIFT' and 'CLEAR' at the same time.

STARTING THE DISPLAY

To Start the display, simply press the START key! You can interrupt the display by pressing either the HELP key or the BREAK key. The HELP key will stop the display and return to the Help Screen. The BREAK key will stop the display and put you into the page edit mode.

SYNCHRONIZING TO AN EXTERNAL TIME SOURCE

In certain advertising or 'electronic newspaper' applications, synchronization of the page display to an external time clock may be desirable. For example, 'electronic newspapers' often wish to schedule certain pages to appear at fixed times so that the viewer knows exactly when to tune in for, say, the classified ads, or the weather, etc.

With 120 pages, timed to display for 15 seconds each, you can have two complete page cycles each hour. The key is then to make sure that the page cycle begins at exactly the top of the hour. If it does, then the remaining pages will appear at exactly the same time each and every hour. You can do this by bringing Pin #6 (RESTORE) of Control Port #1 to ground (logic LOW) momentarily. Doing this causes the sequence to restore to the first page indicated. This RESTORE line can be controlled by an external clock that provides a pulse every hour on the hour. For more info on the Control lines, refer to the Appendix — 'CONTROL PORT CONNECTIONS'.

TABS

Use the 'TAB' key to move across the screen. The TAB spacing is fixed at 5 spaces. Each time you press the TAB the cursor will advance 5 spaces to the right.

UPPER CASE CHARACTERS

If you want to use ONLY Upper case in Format 1 (Small characters), you can lock the keyboard by pressing 'SHIFT' and 'CAPS' simultaneously. ONLY UPPER CASE LETTERS ARE USED IN THE MEDIUM AND LARGE TEXT FORMATS.





With INFO/soft 7000 cartridges, you will see the 'ABC' indicator on the Status Line change as you select different styles of characters.

'XTENDED' DISK FUNCTIONS

The INFO/soft Video Display cartridges are designed to be expanded. New features can be added at a later date. This is done through use of 'Xtended' disk functions. You **MUST** have at least one disk drive on your system to use these extra features.

These features are actually mini programs that reside on the System disk supplied with your cartridge. The 'System Disk' should be in Drive 1 at all times. They are used by entering an 'ESC' - 'X' sequence described on the following pages.

X1 - FULL COLOR PALETTE

Use this feature to change the Background to any of 128 different colors. Large and medium size text (those that appear in 20 character wide screens) can also be changed. Press 'ESC' - 'X' then enter '1'. Now, change the Background color by pressing the 'arrow' keys, , , , or . An UP or DOWN arrow increases or decreases the color intensity. LEFT or RIGHT arrows change the Hue. It is not necessary to hold down the 'CONTROL' key when pressing the arrow keys.

If you are using screen formats 2 or 3, (20 character wide) you can change the character colors, too. Remember, you normally choose characters by pressing 'ESC' - '1' or '2' or '3' or '4'. To change the color of #1, press '1' then use the arrow keys to choose the color. Then, go to '2', '3', or '4'. To get back to the Background color, press '5'.

When you have chosen your colors, press 'BREAK' to resume normal editing.

In screen Format 1, you can change the intensity of the small characters or graphic symbols by pressing '1' and using the UP or DOWN arrow keys.

X2 - PAGE DUPLICATION

If you want to move pages around, this feature allows you to create duplicates instantly. Press 'ESC' - 'X' - '2' to load the program from your 'System Disk'. Then, enter the number of the page you want to copy. It will be duplicated instantly! To duplicate another page, go to the new page, press 'ESC' - 'X' - 'RETURN'. It is not necessary to enter the '2' again since the feature is already loaded. If you use another 'X' command, you will need to enter its number though. There is room for only one 'X' command at a time.

This feature also allows an operator to combine graphics and text from several different pages. See Section 4 for more details on its use.

On the INFO/soft 7000 use the 'X-10' merge feature to duplicate high resolution pages (41-48).

X3 - TITLING FONTS

NOTE: This feature is largely reserved for INFO/soft 5000/7000 cartridges because it makes extensive use of graphic characters to form the Title fonts. However, INFO/soft 3000 users may use 'FONT 11' to 'draw' double height characters on the screen.

There are a number of special titling fonts that can be used to enhance the appearance of your pages. These fonts are 2 to 4 times larger than the standard 'small' size characters and are actually drawn on the screen using graphic characters associated with Graphic Fonts 2, 3, 4 and 5. Thus, these special titling fonts can be used **ONLY** when you are using Graphic Fonts 2, 3, 4 and 5. Upper and Lower case letters, and numbers can be used. A few symbols such as, \$! - and SPACE, are also included. The accompanying illustrations provide examples of these titling fonts.

To 'draw' titling fonts on the screen, you must complete the following steps:

- a. Select Graphic Font 2, 3, 4 or 5 as desired. If you are using a graphic from the Library disk and titling it, you will most likely be in one of these fonts already.

- b. Press 'ESC' - 'X' - '3' to select the X-3 function.
- c. Enter the Title Font number when prompted.
- d. Position the cursor on the screen and begin typing.
- e. When finished, press 'BREAK' to resume normal operation.

NOTE that the characters will erase any text or graphics that are under the character itself. Also, the small character that you first put on the screen marks the Upper Left hand corner of the large titling font.

USE GRAPHIC SET # 3

TITLE FONT 1

title font 2

TITLE FONT 3

TITLE FONT 4

TITLE 5

title font 6

USE GRAPHIC SET 4

TITLE FONT 7

title font 8

TITLE FONT 9

title font 10

USE GRAPHIC SET # 2

TITLE FONT 11

TITLE FONT 11

USE GRAPHIC SET # 5

TITLE 12
title 13

USE GRAPHIC SET # 3

TITLE FONT 14

X4 - SEQUENCE COUNTER

If you are using your system for advertising, you may want to have an actual confirmation of the number of times an advertisement has appeared. The cartridge contains a serial display counter that counts the number of times it has displayed a sequence of pages. The counter is reset to 0 when the computer is first turned on. Each time it completes a display sequence, it advances one count. To retrieve this serial count, press 'ESC' - 'X' - '4'. The count will be displayed on the prompt line. Subtract the number from your previous reading to get the number of times the display has cycled since your last reading.

If you want to check the display counter of a remote system, simply dial up the remote system and using the 'Recall' feature, begin recalling the pages in memory. Since the display count is among the first part of memory to be recalled, you can terminate the recall procedure as soon as you see upper region begin to transfer. Do this by pressing 'BREAK'. This will have no effect on the remote end; it will just go back into the display mode and continue as before. Then, use the 'X4' command to retrieve the display counter number transferred from the remote site.

X5 - ADJUSTING THE CLOCK SPEED

While the clock is controlled by a quartz crystal, small variations in the crystal tolerance sometimes cause minor time errors. Over the course of a month or so, these can cause the clock to be in error by perhaps ± 10 seconds or so. By using the 'X-5' function, you can actually compensate for this minor error and adjust the clock to an accuracy of a second or less per month. Just press:

'ESC' - 'X' - '5'

The prompt line will look similar to the following:

Adjustment Counter: 3852

The number is actually a software adjustment for the clock. To make the clock run **FASTER**, **LOWER** the number using the **DOWN ARROW** key. (Do **NOT** hold down the 'CONTROL' key when doing this). Likewise, to make the clock run **SLOWER**, **RAISE** the number using the **UP ARROW** key. Experiment by changing the number slightly each day until you have found the exact adjustment. Then, record the number in your manual for future reference.

NOTE: We have included this adjustment for those of us who appreciate having an extremely accurate time reference. If you are going to use this feature, be sure to measure the clock accuracy against an accurate time source such as the National Bureau of Standards radio station WWV or WWVH, or similar International time signals. **FOR MOST APPLICATIONS THE INITIAL ACCURACY OF THE CLOCK WILL SUFFICE.** Finally, you must reenter this number if you turn off your system or have a power failure.

X6 - REMOVAL OF X13 TO X20 FUNCTIONS

'X' Functions 13 through 20 are used for special applications such as page scheduling and full-screen displays. These are normally loaded once then reused over and over by executing a special code, e.g., 'ESC' - 'A' for altering the page schedule. It may be desirable to remove some of these features. This is done through the use of the X-6 feature.

To remove a previously loaded X13 through X20 function, press:

'ESC' - 'X' - '6'

Then, press 'Y' when asked to confirm your decision.

X7 - RESERVED FOR FUTURE USE

X8 - SAVING 120 PAGES ON ONE DISK DRIVE

The following applies to the INFO/soft 5000 only:

We strongly recommend investing in a second disk drive when more than 40 pages are to be saved. However, you may use this 'X' Function to 'batch save' all 120 pages with a single drive. Two diskettes will be needed though. First, with your 'System Disk' in the drive, press:

'ESC' - 'SHIFT' + 'S'

Be sure you are holding down the 'SHIFT' key when you press 'S'. This saves the first 40 pages onto the 'System Disk'. Then, press:

'ESC' - 'X' - '8'

When prompted, insert the second diskette and press 'S' to Save. Page 41 through 120 will be saved onto this disk. When prompted, reinsert the 'System Disk'. NOTE: The second disk need not be formatted prior to use. If necessary, the 'X8' Function will format the disk automatically!

To LOAD in all 120 pages, press:

'ESC' - 'SHIFT' + 'L'

When this has loaded the first 40 pages, the prompt line will read:

'DISK ERROR - TRY AGAIN'

Don't Panic! This is normal. Next, press:

'ESC' - 'X' - '8'

Follow the prompts to load pages 41-120.
decision.

X9 - DIRECTORY DIALER

You can enter up to 32 telephone numbers in the directory. Each telephone number can be up to 32 digits long. Begin by entering:

'ESC' - 'X' - '9'

The current directory will be loaded from disk. To ENTER numbers, press the UP or DOWN ARROW keys to display the desired telephone number or blank area. Then, enter the number as you would normally do when sending to a remote site. A typical entry would be:

T 1-206-638-2670 ;INFO/soft Technology

You can add a name, or other ID, to the telephone number. Just place a semicolon, as shown above, after the telephone number. Everything after the ';' will be ignored by the dialer.

After you have entered your numbers, press 'BREAK' to save on disk. To use the directory, use 'ESC' - 'X' - '9', then choose the number with the ARROW keys. Press 'ESC' and then enter the list of pages to send, just as you normally do with the 'ESC' - 'R' Command.

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X10 - HIGH RESOLUTION EDITOR

Used with the INFO/soft 7000 to edit High Resolution pages. Please refer to Pages 4-23, et al, for specific instructions on its use.

X11 - PRINTING PAGES

Used with the INFO/soft 7000 to print both standard and HI RES pages. Use it with Epson or Epson compatible printers. See Pages 4-23, et al, for specific instructions.

X12 - HI-RES GRAPHIC IMPORT

Used with the INFO/soft 7000, to import graphics created with other drawing and digitizer programs. See Pages 4-23, et al, for additional information and instructions.

X12 - (3000 & 5000 ONLY)

SENDING 'X-FEATURES' TO A REMOTE SITE

TO SEND 'X' FEATURES TO A REMOTE LOCATION, USE THE NEW X-12 COMMAND. X-12 WILL ONLY SEND THE 'X' FEATURES. THUS, YOU WILL HAVE TO SEND 'X' FEATURES BEFORE YOU DOWNLOAD PAGES TO A REMOTE LOCATION.

For example, to set up a remote location to do page scheduling follow these steps:

- a. Use a disk that is configured to load the X-13 Page Scheduling feature.
- b. Create any pages you need to send.
- c. Use X-12 to send the 'X' features to the remote site.

Press 'X' - '12' - 'RETURN'

The screen will ask for a telephone number. Enter the number of the remote site and press 'RETURN'. 'X-12' will send the 'X' features to the remote site.

- d. Use 'ESC' - 'R' to send the desired pages. BE SURE YOU SPECIFY THE PAGES THAT YOU WANT TO SEND, DO NOT PRESS RETURN WHEN ASKED TO ENTER THE PAGE LIST. IF YOU WANT TO SEND EVERYTHING ENTER: 'CBUST 1-120' OR SIMILAR COMMAND.

X-13 - PAGE SCHEDULING

Another standard feature included with your 'System Disk' is page scheduling. This feature allows you to turn pages ON or OFF at predesignated times. For example, an advertisement for a weekend sale could be set to turn ON at 6:15 PM Thursday, March 13th and OFF at 4:55 PM Sunday, March 16th. Each page may be scheduled independently, too!

To use this feature, press:

'ESC' - 'X' - '13'

The function will be installed into the computer. To access it press:

'ESC' - 'A' (Alter Schedule)

NOTE: The 'ESC' - 'A' feature will be added to the Help Screen as a reminder that it has been installed!

The prompt line will read:

001: ON Date 00 Time 00:00 OFF 00 00:00

The number on the far left corresponds to the page number. When all of the dates and times are '00' the page will be displayed continuously. Thus, when you first begin, all pages will be 'zeroed out'. To have page 23 turn ON at 6:15 PM on March 13, and OFF again at 3:40 PM on March 16, your line should look like this:

023: ON Date 13 Time 18:15 OFF 16 15:40

Note that we use a 24 hour time format to avoid confusion. To get to page 23 or to any other page, use the ARROW keys. When finished, press the 'BREAK' key to exit.

When you save pages to your disk the scheduling information will be stored along with it.

**REMEMBER TO REMOVE SCHEDULED TIMES
BY ZEROING OUT THE ON AND OFF TIMES
WHEN YOU NO LONGER NEED TO
SCHEDULE PAGES.**

If you plan to make constant use of this feature, you might want to have it loaded automatically. Refer to Section 2 - Set-Up for information on 'Configuring the System Disk'.

X-14 - Reserved for Future Use

X-15 - VCR CONTROLLER OPTION

This 'X' command is supplied with the 6080 VCR Controller. It is loaded automatically from the 'System Disk' when the computer is first turned on. To enter data, press 'ESC' 'V'. Refer to the '6080' manual for complete programming details.

X-16 - Reserved for Future Use

X-17 - Reserved for Future Use

X-18 - FULL SCREEN DISPLAYS (3000 & 5000 ONLY)

The 'X-18' Function adds Full-Page displays to your INFO/soft 3000 or 5000. This format has 40 characters across the screen and a total of 20 lines top to bottom. There is no Upper, Crawl or Bottom Region. To use it, you must first load the 'X-18' function into the computer. This is done by configuring the SYSTEM DISK to load the X-18 function when the computer is first turned on. Unless you have changed the configuration, your SYSTEM DISK is already set up in this way. You can verify this by looking at the HELP SCREEN. The Help Screen should read:

'ESC \$ - FULL SCREEN'

To select the 'Full Screen' page format, go to the desired page and press:

'ESC' - '\$'

To go back to another format (those with the Upper, Crawl, and Bottom Regions) just press:

'ESC' - 'F'

If you want to send a 'Full Page' format to a remote location via telephone line, make sure that the remote location has the 'X-18' function loaded. You can do this without having a disk drive at the remote site. Please refer to the 'X-12' function described earlier in this section.

X-19 - HIGH RESOLUTION HEADERS

Available on all models, the High Resolution 'Header' is a 320 x 24 pixel area that can be used to accurately reproduce a company logo or other stylized message. The 'X-19' option is custom designed by INFO/soft and supplied on a special 'System Disk'. This disk automatically loads the 'X-19' high resolution header. It may be used on more than one system and can be transferred to a remote site by using the 'X-12' command (3000 and 5000 only). The 7000 will transfer it automatically to the remote site during normal transmissions.

If you have an INFO/soft 7000, you can see several samples of High Resolution headers. Take your original 'Dist #2' labelled 'High Resolution Demo'. Flip it over so that the label faces downward and insert it into the disk drive. Go to page 44 and press 'ESC' 'L' 'RETURN'. A high res page with several examples of high res headers will be displayed. One of these is, of course, normally displayed in the Upper Region area of the screen.

Only ONE high resolution header can be displayed at a time.

For pricing and additional information about this option contact INFO/soft Technology directly.

X-20 - TEMPERATURE DISPLAY OPTION

Used in conjunction with the 6101 Temperature Display option. It displays the Current Temperature, as well as the High and Low Temperatures for the day and the times at which they occurred.

Temperatures are displayed in both Fahrenheit and Celcius in the bottom region of the screen. The temperature alternates with the Date/Time and message display.

See the manual supplied with this option for more details and installation instructions.

REMOTE FUNCTIONS

COMPATIBILITY BETWEEN INFO/soft SYSTEMS

With a few exceptions, the INFO/soft 3000 and 5000 are compatible and pages may be transferred between them. You must remember that the INFO/soft 5000 cartridge has 3 graphic character sets that are not available on the INFO/soft 3000. Therefore, if you are planning to create pages on an INFO/soft 5000 and send them to an INFO/soft 3000 system, use Character Sets 1 and 2 only. Also, since the INFO/soft 3000 has only 40 pages of memory, do not try to send pages 41 through 120 to it. Pages created on an INFO/soft 3000 system can be sent without regard to an INFO/soft 5000 system.

INFO/soft 7000 Text and standard character graphic pages can be sent to both the INFO/soft 3000 and 5000. The same restrictions apply on the 3000 equipped systems. If the 7000 is used in the 120 page mode, you can send all 120 pages to an INFO/soft 5000 equipped system and vice versa. However, high resolution pages can only be sent to another INFO/soft 7000 system. **DO NOT TRY TO SEND HIGH RESOLUTION PAGES (41-48) TO A 3000 OR 5000 SYSTEM.**

REMOTE SEND

To send pages to another INFO/soft system, use the 'ESC' - 'R' command. Enter the telephone number, and press 'RETURN'. You will then be asked to enter the page list to be sent. To send all pages, simply press 'RETURN' again. For example, to send an EXACT copy of the contents of your machine to a remote location, press:

'ESC' - 'R' - TELEPHONE # - 'RETURN' - 'RETURN'

The cartridge will dial the remote location and transfer all pages and regions, set the time at the remote location to within $+/-$ 1 second of the time currently set on your machine, set the appropriate sequence, and then hang up. The remote end will display pages exactly the same way as your unit. As the regions and pages are being sent to the remote site, you will see them on your screen. What you are seeing is what was ACTUALLY received at the other end. This amazing feature is called REMOTE VIEWING and is described below in more detail.

TRANSFER OF INDIVIDUAL PAGES OR REGIONS

In some cases, it may be desirable to transfer **ONLY** one or two items, such as a new Upper or Bottom Region, a correct Time, a new Sequence, or just a few new pages to update the remote display. You can do this simply and quickly. When you are prompted to enter a 'page list' to send, enter any or all of the following:

- B - Sends the Bottom Region**
- C - Sends the Crawl Region**
- S - Sends the Sequence Information**
- T - Sends the Time**
- U - Sends the Upper Region**

For example, entering:

C T 1 3

will send a new Crawl Region, update the Time, and send pages 1 and 3 to the remote location. Nothing else will be sent.

RECALL

You can call a remote location and 'RECALL' its pages into your memory! This is useful when you want to make sure that everything is working correctly at the remote site or want to make changes.

To use this feature, simply follow the same procedure as when you transferred pages to the remote. That is, press 'ESC' - 'R', enter the telephone number and when you are asked to enter the page list, enter the letter 'R' (for 'RECALL'). The cartridge will establish contact and automatically transfer the contents of the remote site into your computer. As this transfer is taking place, you will see the pages appear on your screen. (On INFO/soft 7000 systems, you will NOT see the high resolution pages while the recall is in progress. But you will notice the page numbers change on the 'Status Line'.) When the 'Recall' process is finished, the call will be terminated. The remote end will go back to displaying pages, and you will have an exact duplicate of the remote's memory in your machine!

BEWARE! Make sure that you have saved the contents of your memory on disk before using the 'Recall' feature, since recalling erases anything that you previously had in your memory and replaces it with the remote's memory.

REMOTE VIEWING

Remote Viewing is an automatic feature! As you transfer pages to a distant site you will see these pages appear on your screen. **WHAT YOU ARE SEEING IS THE PAGE AS IT WAS RECEIVED AT THE DISTANT SITE!** It's comforting to know that your pages arrived the way you sent them! And, if there was any error in transmission, you will see the correction being made automatically!

Please note that on INFO/soft 7000 equipped systems, high resolution pages cannot be shown while data is being transferred. You will see that the number of the page being sent is displayed on the 'Status Line'. High resolution pages take up to ten times as long as standard pages to send to a remote site.

ERROR CORRECTION

Errors caused by noise on the telephone line will be corrected automatically. If the line is simply too noisy for efficient transfer of data, it will terminate the transmission and inform you of the problem. We designed the software to be sensitive to your telephone expenses. Sometimes, particularly on long distance calls, you can eliminate a noisy telephone line simply by redialing the call. It takes less time, and costs you less, to transfer pages when the line is good.

In most circumstances, you will rarely, if ever see a transmission error.

DIALING THROUGH A PBX OR COMMON CARRIER

If you are dialing through a central PBX telephone system or are making long distance calls through a Special Common Carrier such as MCI or SPRINT, you can use some additional dialing codes to make your work easier. If, for example, you want to add a 2 second pause to allow extra time for connections, you can use a ',' (comma) between numbers to get a pause. Each comma adds a 2 second pause. So, a 4 second pause can be created by using two commas. For example:

9,,555-1212

would dial 9, then wait 4 seconds for access to an outside line, then dial 555-1212.

Long Distance Common Carrier services require the dialing of a local number, entry of a special access code, and finally the number that you want to call. Once, you have dialed the local number, you need a Tone-dialing phone to enter the code and telephone number. If you are using a smart modem, you can easily switch between pulse and tone dialing, allowing you to dial the Common Carrier using pulse dialing and then switch to tone dialing for the rest of the code. For example:

P441-1234,,T7654321, (206) 638-2670

will dial the Common Carrier's local access number (441-1234) using pulse dialing. Then, wait 4 seconds for a connection, switch to tone dialing, enter the user's access code (7654321), wait 2 more seconds and then dial the desired number! While this seems complicated, it illustrates the level of complexity that you can achieve.

RE-DIALING

If you need to re-dial the last number called, you may do so with the HAYES Smartmodem. Instead of re-entering the telephone number when prompted, type:

CA/ 'RETURN'

'CA/' stands for 'Call Again'. But, this works only with the HAYES or HAYES-compatible modems.

DELAYED ANSWERING

It may be desirable to have the modem at the remote site wait several rings before automatically answering. This is useful if the same telephone line is to serve double duty as a communication link to a headend technician. At your headend, you can manually set the HAYES Smartmodem to delay answering by entering:

'ESC' - 'R'

Instead of entering the telephone number, type:

C AT S0=3 'RETURN' 'RETURN'
PLEASE NOTE THAT THE '0' IS A 'ZERO' AND
NOT THE LETTER 'O'

This will send a command to the HAYES Smartmodem to answer after 3 rings. Wait at least 5 seconds after entering this code, then press 'BREAK' to get back to the HELP screen.

NOTE: DO NOT set the delay to more than 7 to 8 rings. The cartridge will wait for up to one minute for an answer before it assumes that there is not going to be any answer and terminates the call.

MANUAL DIALING

In some cases, it may be necessary to manually dial the telephone and establish audible contact with the modem before sending data. To do this, enter 'ESC' 'R' as normal. But, instead of entering the telephone number when prompted, just press 'RETURN'. Then, enter the pages that you desire to send — but, **DO NOT PRESS 'RETURN' yet!** Use your telephone to dial the remote site. When you hear the modem tone, press 'RETURN', wait one or two seconds, and hang up the telephone instrument. The transmission will proceed and terminate normally.

OTHER REMOTE COMMANDS

If you are using the HAYES Smartmodem, or a 'smart' modem from another source, you can send special command codes to the modem by using the 'C' command built into the cartridge. When you are asked to enter the telephone number enter a 'C' followed by the command code required by your modem. For example:

C xxx###

would send the command 'xxx###' to the modem directly. Any printable character can be sent to the modem whether it be a sequence or letter and numbers, or some other combination of letters, numbers and graphic symbols. 'ESC' or similar codes CANNOT be sent. Few modems use these anyway. Most of the current batch of smart-modems imitate the HAYES commands so that they can be compatible with existing software.

A list of useful commands for HAYES and HAYES-compatible modems is included in the Appendix section of this manual.

CASSETTE STORAGE (3000 & 5000)

Because of limitations present in cassette systems, only Pages 1 to 23, the Upper, Bottom, and Crawl Regions can be saved on the cassette tape.

To SAVE, press:

'ESC' - 'S'

The screen will show:

'TRANSFER IN PROGRESS'

When you see this message, press the 'PLAY' and 'RECORD' buttons on the cassette recorder. Then, press 'RETURN' to start the process.

To LOAD, press::

'ESC' - 'L'

The screen will again show:

'TRANSFER IN PROGRESS'

When you see this message, press the 'PLAY' button on the cassette recorder. Then, press 'RETURN' to start loading.

It takes approximately 6 minutes to save or load all 23 pages. BE SURE TO USE A CASSETTE TAPE THAT IS RATED AS A C-15, C-30 OR LONGER TO INSURE THAT THERE IS ENOUGH TAPE TO COMPLETE THE RECORDING. OTHERWISE AN ERROR WILL OCCUR WHEN RE-LOADING.

It is best to use a leader-less cassette tape designed for data storage.

NOTE: If your monitor has a speaker and you have installed computer audio, or if you are using a TV set as a monitor, you will hear 2 beeps when you press 'ESC' - 'S'. This is a reminder to tell you to press 2 buttons. Play and Record, on the program recorder. When loading, you will hear one beep to remind you to press the 'Play' button only.

Cassette tapes are notorious for drop-out, noise, and transient problems that cause data errors. Therefore, you may find it necessary to load pages more than once. Should an error occur, a message to that effect will be displayed on the screen. Pages that were loaded prior to an error will be intact. Pages occurring after the error will usually appear 'black'.

Since some of the advanced features in your INFO/soft 3000 and 5000 cartridges are loaded from disk, they are not available on cassette-only systems. Some of those features not available include all of the 'Xtended Functions', multiple Language prompts and 'HELP' screens, power-failure autoloading, use of graphic libraries, and many of the optional accessories like temperature display, VCR control, etc.

Cassette systems are useful where initial cost must be kept to an absolute minimum. We have included the necessary 'System Disk' so that you can add a disk drive and regain these lost features at some time in the future. **KEEP YOUR SYSTEM DISK IN A SAFE PLACE!**

CASSETTE AND DISK SYSTEMS

It is possible to use BOTH Disk and Cassette storage. If the Disk Drive is connected and turned 'ON', the software will automatically select the 'Disk Drive' as the primary means of storage. If the Disk Drive is turned 'OFF' or not present, cassette storage is assumed.

In some instances, it may be desirable to create information displays, perhaps using library graphics, and then transfer these to cassette, so that they can be sent to other cassette-only systems. To do this, turn your Disk Drive 'ON' and create your displays on pages 1 through 23. Then, turn the Disk Drive 'OFF' (and connect your cassette program recorder if it isn't already connected in the system). Press 'SYSTEM RESET'. When you do this, the software cartridge checks to see what kind of storage is connected to the computer. Since the Disk Drive is OFF, it automatically sets itself up for cassette storage. To save the 23 pages, press 'ESC' - 'S' as outlined in the previous paragraphs.

To reverse the process, turn the Disk Drive 'ON' and press 'SYSTEM RESET' again. This reinstalls the Disk Drive.

CASSETTE RECORDERS AND REMOTE OPERATION

Some production models of the Atari 410 and 1010 Cassette Program Recorders place a heavy load on the data lines coming from the computer. This may interfere with proper data transfer when the system is used for remote applications. Therefore, we strongly suggest that you remove the cassette recorder if you experience any problems in transferring data over telephone lines.

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GRAPHIC CHARACTERS

The INFO/soft 5000 and 7000 cartridges come equipped with five special character sets most of which can be used to create graphics. You can use these to create a wide variety of graphic designs. The Fonts are numbered according to the following chart:

| FONT NO. | UPPER/ LOWER | GRAPHICS STYLE |
|-------------|-----------------|-------------------|
| 1 | Both | International |
| 2 | Upper | Double Height |
| 3 | Upper | Blocks/Lines |
| 4 | Upper | Prestel-like |
| 5 | Both | Mosaic |

You may not mix different character sets on a single page, but each page can use a different character set.

On INFO/soft 7000 systems, the character set currently in use will be displayed on the 'Status Line'.

The following page shows the graphic symbols in each of the graphic sets.

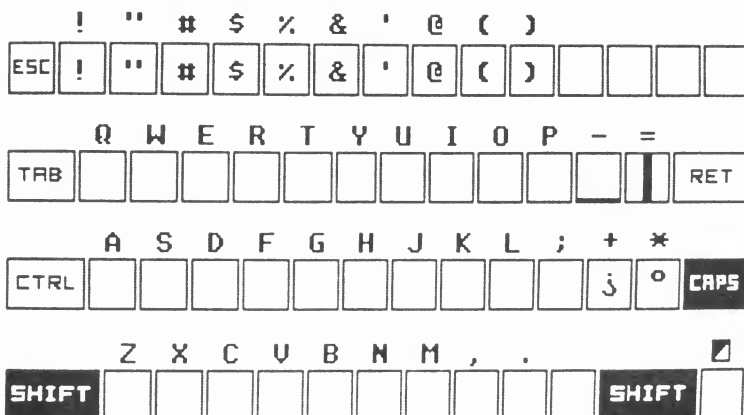
FONT 1 — INTERNATIONAL CHARACTER SET

Font 1 contains both Upper and Lower case characters plus a set of 'International' characters which are displayed by holding down the **CONTROL** key while pressing the appropriate character. The location of the characters is shown in the diagram on the facing page.

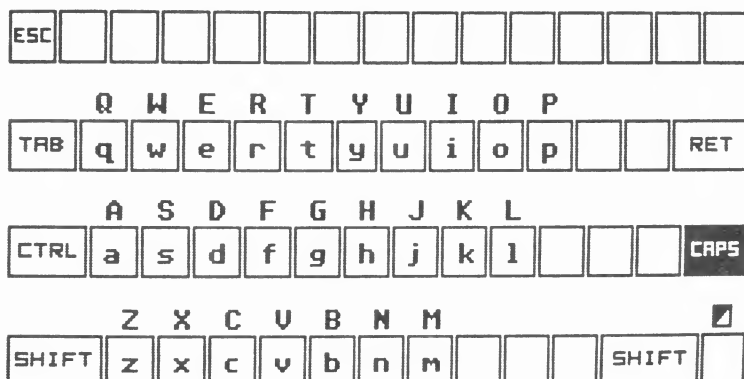
Hold 'CONTROL' Key Down:

| | | | | | | | | | | | | | | | | |
|-------|---|---|---|---|---|---|---|---|---|---|--|--|--|-------|------|---|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | | | | | |
| ESC | | | | | | í | ÿ | f | | | | | | | | |
| | Q | W | E | R | T | Y | U | I | O | P | | | | | | |
| TAB | â | ê | ô | û | é | à | è | ï | ö | ü | | | | | RET | |
| | A | S | D | F | G | H | J | K | L | ; | | | | | | |
| CTRL | ù | î | ç | ò | ì | ƒ | ü | ä | ö | Ä | | | | | CAPS | |
| | Z | X | C | V | B | N | M | , | . | | | | | | | ☑ |
| SHIFT | À | à | É | ñ | Ñ | ó | ú | á | í | | | | | SHIFT | | |

Hold 'SHIFT' Key Down:



Press 'CAPS' Once:



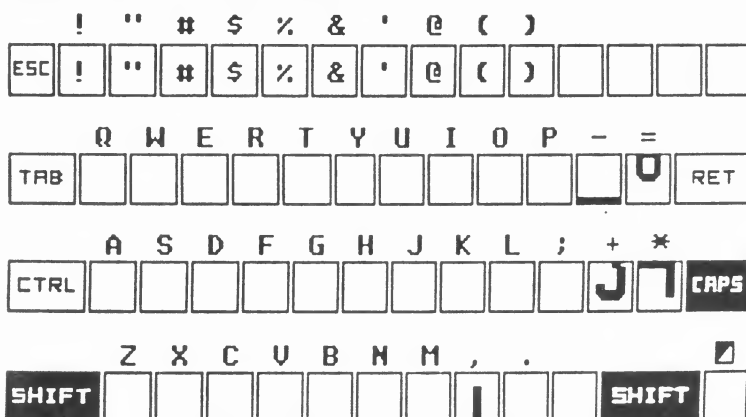
FONT 2 — DOUBLE HEIGHT CHARACTER SET

Font 2 has a special 'Graphic' set that allows the use of both Large and Small text on the same page. Instead of lower case letters and graphic symbols, the characters are divided into top and bottom halves of larger characters. For example, to put a large letter 'A' on the screen, press 'CONTROL' 'A' for the upper half of the 'A', then move the cursor underneath the upper half. Press the 'CAPS-LOWR' key once to place the keyboard into Upper/Lower case and press 'A'. The lower part of the letter will be printed and you will have a large letter 'A'. This Font is very useful for titling pages of small sized text. Return to normal size text by pressing 'SHIFT' and 'CAPS' simultaneously.

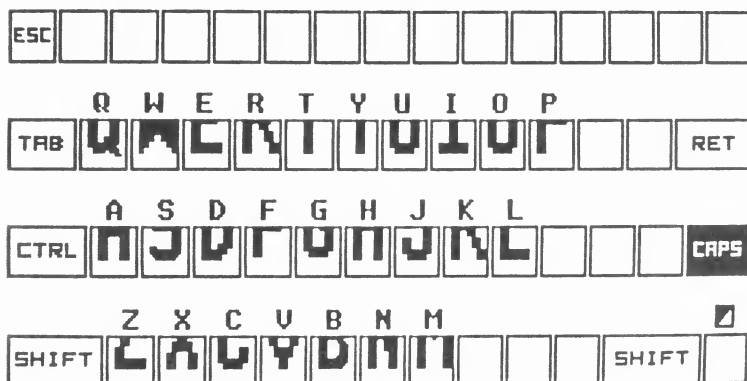
Hold 'CONTROL' Key Down:

| | | | | | | | | | | | | | |
|-------|---|---|---|---|---|---|---|---|---|---|---|-------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | | 8 | 9 | 0 | < | > | |
| ESC | | | | | | | | | | | | | |
| | Q | W | E | R | T | Y | U | I | O | P | | | |
| TAB | | | | | | | | | | | | | RET |
| | A | S | D | F | G | H | J | K | L | ; | | | |
| CTRL | | | | | | | | | | | | | CAPS |
| | Z | X | C | V | B | N | M | , | . | | | | |
| SHIFT | | | | | | | | | | | | SHIFT | |

Hold 'SHIFT' Key Down:



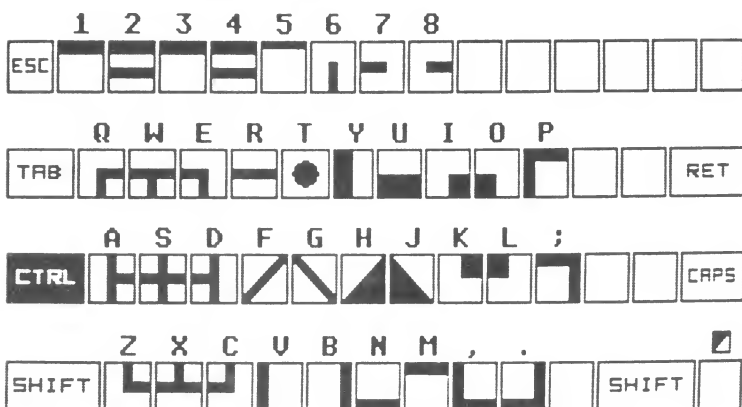
Press 'CAPS' Once:



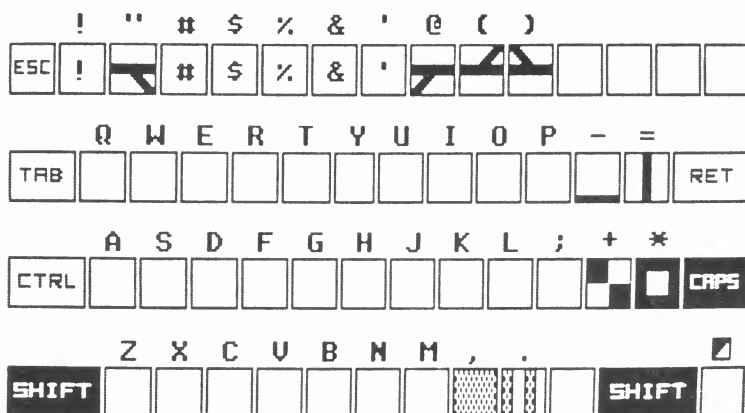
FONT 3 — GRAPHIC LINES AND BLOCKS (INFO/soft 5000, 7000 only)

Font 3 has an extensive graphic character set that provides 150 graphic symbols. Lower case characters are NOT available with this font. Lower case characters have been replaced with additional graphic characters. The charts below show the positions of these graphic symbols on the keyboard.

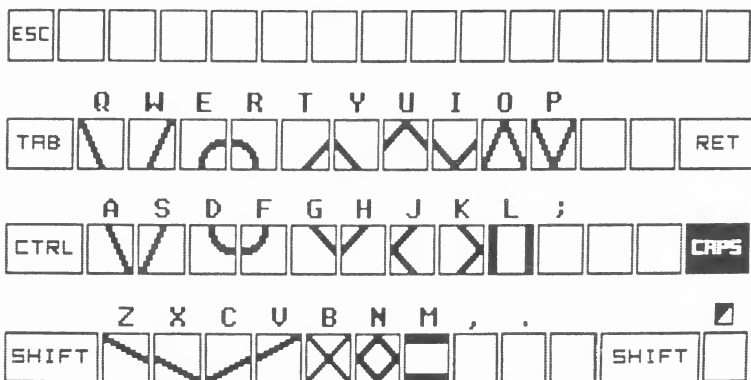
Hold 'CONTROL' Key Down:



Hold 'SHIFT' Key Down:



Press 'CAPS' Once:



Colored Blocks

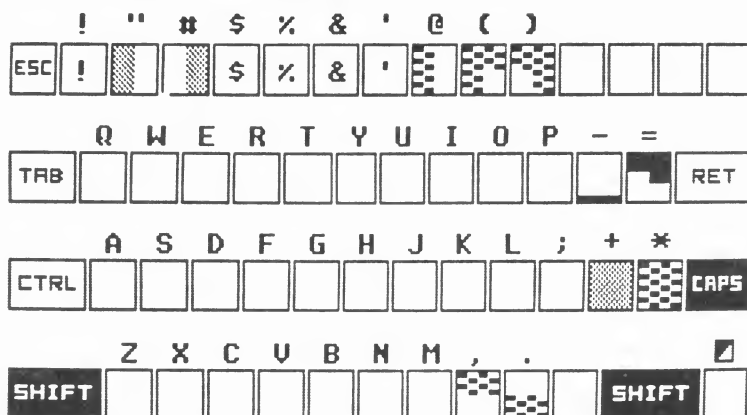
FONT 4 — PRESTEL-LIKE GRAPHIC SET (INFO/soft 5000 & 7000 only)

Font 4 is an extended set of 'Block Mosaic' graphic characters used in Prestel and other International Teletext systems. In addition, there are extra graphic symbols to further enhance your graphic designs. As in Font 3 above, only Upper case letters are available in this font. The Lower case characters have been replaced by extra graphic symbols. There are 158 graphic symbols in this character font when used in normal and Inverse video modes.

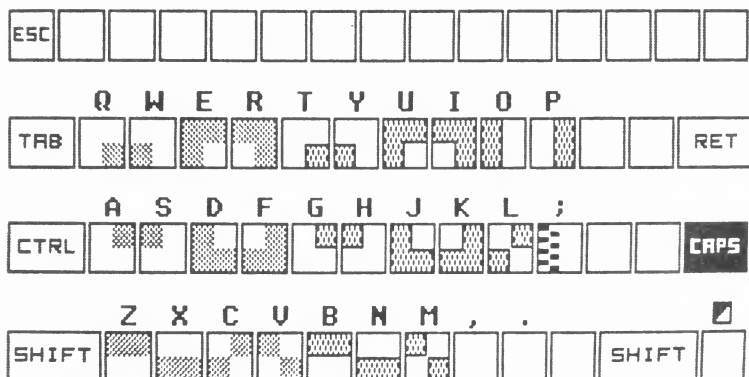
Hold 'CONTROL' Key Down:

| | | | | | | | | | | | | | | | | |
|-------|---|---|---|---|---|---|---|---|---|---|--|--|--|--|-------|------|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | | | | | |
| ESC | | | | | | | | | | | | | | | | |
| | Q | W | E | R | T | Y | U | I | O | P | | | | | | |
| TAB | | | | | | | | | | | | | | | | RET |
| | A | S | D | F | G | H | J | K | L | ; | | | | | | |
| CTRL | | | | | | | | | | | | | | | | CAPS |
| | Z | X | C | V | B | N | M | , | . | | | | | | | |
| SHIFT | | | | | | | | | | | | | | | SHIFT | |

Hold 'SHIFT' Key Down:



Press 'CAPS' Once:



Tint 1



Tint 2

FONT 5 — MOSAIC GRAPHIC SET **(INFO/soft 5000 & 7000 only)**

Font 5 provides Mosaic block graphics. They are easy to use, and very good for borders and simple designs. Both Upper and Lower case characters can be used. The colors of the mosaic blocks are 'transparent'. They are 'Blue' and 'Red' transparent blocks whose final color also depends upon the color of the background. This gives the graphic artist another element of creativity. Select the graphic symbols by holding down the 'CONTROL' key while pressing the appropriate graphic key.

Hold 'CONTROL' Key Down:

1

2

3

4

5

6

7

8

ESC

Q

W

E

R

T

Y

U

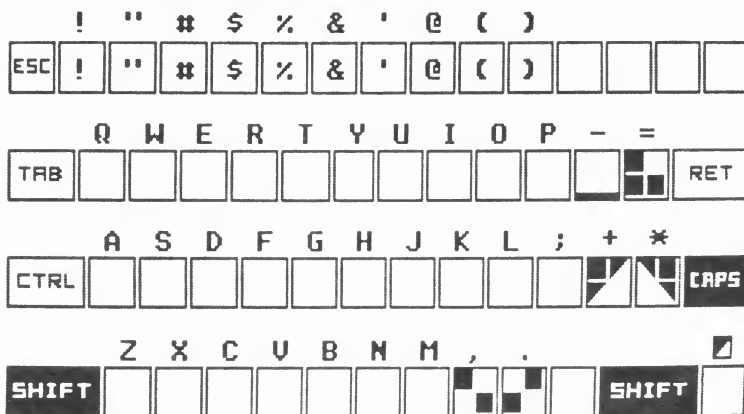
I

O

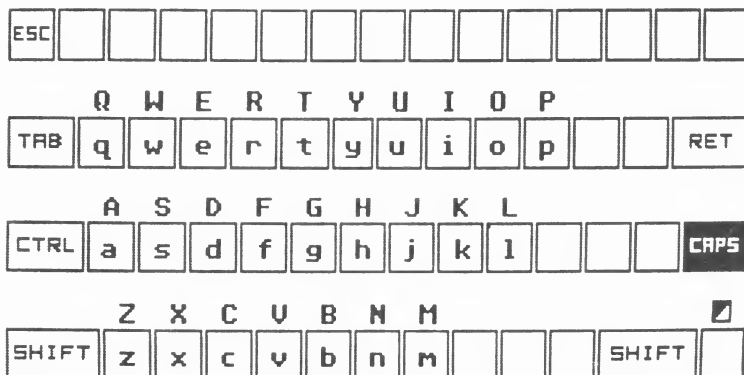
P

TAB



Hold 'SHIFT' Key Down:




Press 'CAPS' Once:



USING INVERSE VIDEO

All characters, text and graphic, can be used in their 'Inverse' forms, by pressing the  key once. Each time you press the  key, you switch between 'Normal' and 'Inverse' video. For example:

| Character | Keystrokes | Character | Keystrokes |
|---|------------|---|---|
|  | Control A |  |  Control A |
|  | Control B |  |  Control B |
|  | Control C |  |  Control C |

Using the  key effectively doubles the number of graphic characters that you have available. In fact, the Graphic Fonts were designed with this in mind. If, for example, you wanted to put a solid block the size of an entire character on the screen, press the key and then hit the SPACE bar!

On INFO/soft 7000 systems, the 'ABC' characters on the 'Status Line' will change as you select normal and inverse video.

DESIGNING GRAPHICS

There are basically two steps to the creation of a graphic image:

- a. Layout of the image on graph paper
- b. 'Keying' the image onto the screen

Once the image has been created, it can be saved onto a diskette for use again and again.

Except in cases where the image is quite simple, it is usually best to lay out a graphic design on a piece of graph paper before 'keying' it onto the screen.

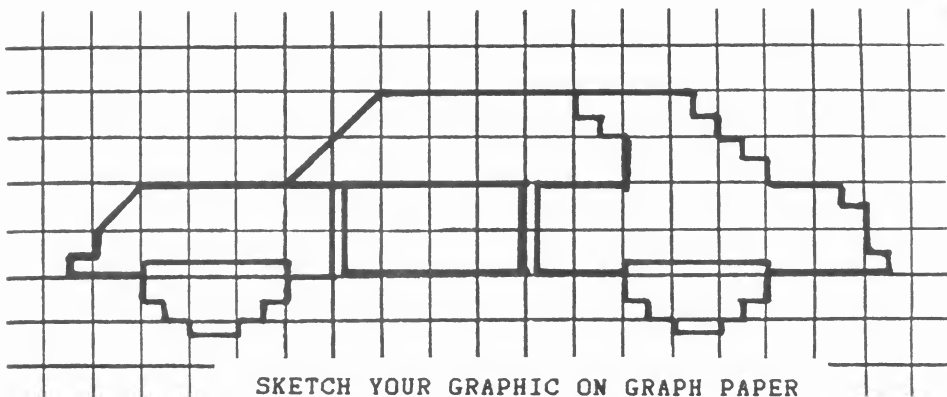
DESIGNING GRAPHICS

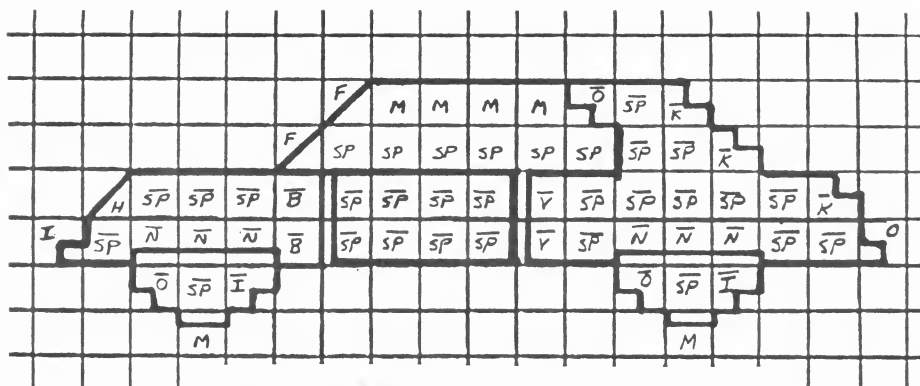
SAMPLE DESIGN

In the sample below, notice how we have sketched the image of the car on a peice of graph paper. Then, in the next sample we have used the graphic symbols of Font 3 to 'fill in' our sketch. Now, we can begin 'keying' our graphic onto the screen. When we are done, we should have a car that looks like our final sample.

You can use any graph paper. Each one of the screens is 40 columns, or boxes, wide and there are 16 lines.

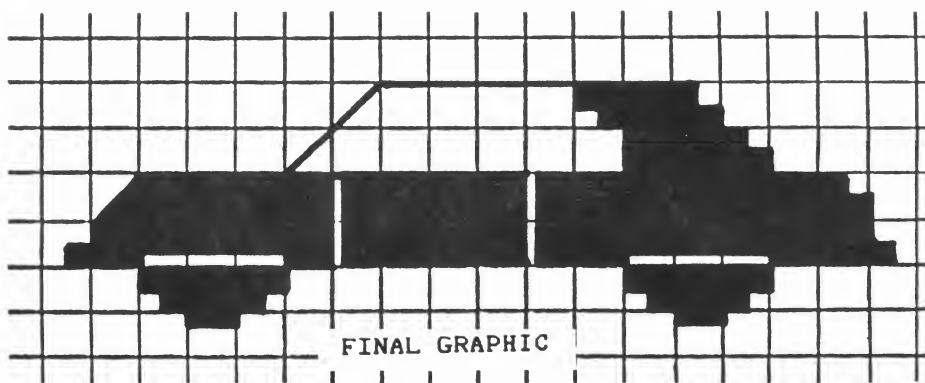
Creating graphics takes time to master. It will not seem as difficult once you have practiced. Keep experimenting, and soon you will be creating masterpieces!





SP = SPACE

N = INVERTED VIDEO, CONTROL 'N'



SAVING YOUR DESIGNS

Save your creations on disk just as you would save an ordinary page. You will probably want to create a special disk just for your graphic creations. Make a copy of your 'System Disk' as described in Section 2 — Set up. Then, save your graphic using the 'ESC' - 'S' command and keep a separate 'table of contents' for future reference.

USING THE GRAPHIC LIBRARIES

If you are using the optional Graphic Libraries, your task of dressing up your displays will be considerably easier. These Libraries contain 80 graphic designs per volume and are contained on a single diskette. You must, of course, have a disk drive as part of your system. Simply choose a graphic design from the catalog supplied with the disk, and **LOAD IT JUST AS YOU WOULD ANY PAGE THAT WAS PREVIOUSLY SAVED TO DISK**. Once the graphic image is on your screen, just add your message or advertising copy!

For example, to use the 'Clown' graphic on the 'Graphic Library' Disk (side B, #16), place side 'B' in your Disk Drive, then press:

'ESC' - 'L' - '16' 'RETURN'

To load 'page 16' (graphic 16) from the Disk.

COMBINING DIFFERENT GRAPHICS

Different graphics can be combined on the same screen as long as they use the same Graphic Font and Format. To do this, we will make use of the 'X-2' Duplication feature described in the previous section. First, decide which of the graphic designs you want to combine. Select two blank pages and load each graphic into a separate page. Next, using the 'Character Insert and Delete' keys and the 'Line Insert and Delete' keys, position each of the graphics in the desired location. The final step is to lay the second page over the first to create the new combined graphic. Go to the first page. Press 'ESC' - 'X' - '2'. Then enter the number of the second page. The second page will then be overlayed on the first!

You can create interesting effects by overlapping graphics as well. Take one graphic, load it into both empty pages, then position one slightly different from the first. Then, use the same 'ESC' - 'X' - '2' procedure to overlay the second page on top of the first, or vice versa.

ANIMATED GRAPHICS

Using a procedure similar to the above, you can rapidly create an animated display. Suppose you want to create an animated display of a moving car. Design the basic graphic, or load in a predesigned graphic from a Graphic Library volume. Let's say, we decide to use 6 pages in our animated sequence for a nice smooth motion. Make 5 copies of the car graphic that you previously created. For convenience, let's use the next five pages so that all of our animated sequence is located in the same area of memory. Make these copies by using the 'X-2' Duplication feature:

'ESC' - 'X' - '2' - (Page #) RETURN

The 'Page #' is the page where the original graphic is located. Next, using the 'Line Insert' & 'Line Delete' position the car in such a way that it will form a smooth animated sequence with the car travelling from right to left. Set each of the page DWELL times to 0.

'ESC' - 'D' - '0'

To overlay your text on these pages, select a blank page, write your text message, then follow the procedure outlines in the section above —
COMBINING DIFFERENT GRAPHICS.

Within just a few minutes you have created an attractive animated sequence!

GRAPHIC LIBRARY CATALOGS

The following area is reserved for Graphic Library Catalogs. Place these catalogs here for quick reference. Contact INFO/soft Technology, or your dealer or distributor, for a list of available graphic volumes.

To load a graphic from a Library Disk, place the diskette into Drive #1. If you are choosing a graphic from Side 'A' the label should face UP as you insert the diskette into the drive. If you are choosing side 'B' the label should be DOWN.

Load the graphic as you would load a page. To load Graphic #16 press:

'ESC' - 'L' - '16' 'RETURN'

GRAPHICS VOLUME 1, SIDE 'A'

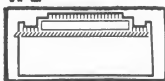
#1



#2



#3



#4



#5



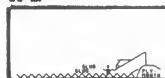
#6



#7



#8



#9



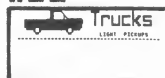
#10



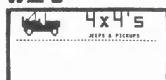
#11



#12



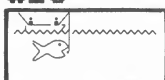
#13



#14



#15



#16



#17



#18



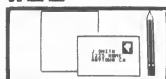
#19



#20



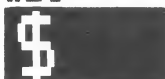
#21



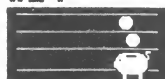
#22



#23



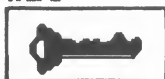
#24



#25



#26



#27



#28



#29



#30



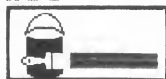
#31



#32



#33



#34



#35



#36



#37



#38



#39



#40



GRAPHICS VOLUME 1, SIDE 'B'

#1



#2



#3



#4



#5



#6



#7



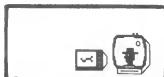
#8



#9



#10



#11



#12



#13



#14



#15



#16



#17



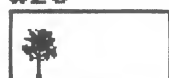
#18



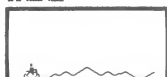
#19



#20



#21



#22



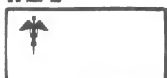
#23



#24



#25



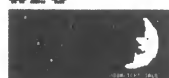
#26



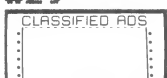
#27



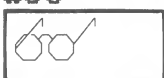
#28



#29



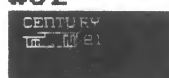
#30



#31



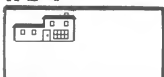
#32



#33



#34



#35



#36



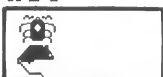
#37



#38



#39



#40



HI RES GRAPHICS ON THE INFO/soft 7000

The INFO/soft 7000 has the unique feature of being able to display 8 pages of High Resolution (320 x 200 pixel) graphics in addition to 40 standard pages of Text and Character graphics. HI RES graphic displays are generally created by loading a pre-drawn graphic from a 'Library' diskette and adding your own text messages from the keyboard. With additional equipment, however, users can also create their own graphic designs.

The 7000 was created in response to requests from many users of 5000 based systems who wanted a means of duplicating, as far as possible, the logos and artwork of advertisers. Many Cable TV companies also wanted to 'cross-promote' their pay TV services on their local origination channel—finding that this cross promotion was directly responsible for increasing their 'pay' TV subscribership. The 7000 is a perfect choice for this and it can also be used to insert HI RES graphics into the local advertising avails of many satellite delivered program services.

In creating the 7000 our engineers actually created an entirely new mode of operation for the Atari 130XE computer. This new mode allows us to combine detailed High Resolution Graphics having 320 x 200 pixel resolution with other modes having up to 16 shades of gray and 80 pixel resolution. The result is a high resolution screen that looks as good as many 'photo ad' systems costing tens of thousands of dollars!

In the following pages, we will show you how to use the 7000 HI RES pages.

DISKETTES SUPPLIED

The INFO/soft 7000 is supplied with a '7000 SYSTEM DISK', a 'DISK #2', and a 'PROMO DISK'.

'7000 SYSTEM DISK' - provides the basic operating software needed by the 7000 cartridge. Also provides space to store pages 1 through 40, the standard text and graphic pages, and various 'X-commands' that are used to expand the basic capabilities of the 7000 cartridge.

'DISK #2' - This disk provides a place to store your HI RES graphic pages (41 through 48). On the 'Disk #2' provided in your manual, we have included a number of sample pages.

'PROMO DISK' - This diskette contains a number of graphics that can be used to help cable TV operators promote their services. These graphics are designed to increase subscribership by allowing 'cross promotion' on a local origination channel or through insertion during the local advertising avails provided on many satellite services.

DEMONSTRATION

Insert the 7000 cartridge into the rear of the 130XE computer. Insert the '7000 SYSTEM DISK' into the DISK DRIVE. (If you have two drives, also insert the 'DISK #2' into drive 2). Turn the computer ON. If you are using one drive, the computer will prompt you with the message.

'INSERT #2 DISK'

Place 'DISK #2' in the drive and press any key to continue. Within a minute or so, you will begin to see a demonstration. We have included several 'PHOTO' type ads to show you the remarkable quality achievable on such an inexpensive computer. But, we suggest you look at these on your TV set, as your subscriber will, to get the best effect. The 'PHOTO' mode has less resolution than the HI RES graphics and generally looks best when seen on an ordinary TV screen instead of a high resolution monitor. In fact, this mode is ideal for Cable TV since it does not lose quality as the signal passes through cascaded amplifiers. On the contrary, the 'PHOTO' mode actually increases in apparent quality as the adjacent pixels are smoothed by the distortion introduced by these cable amplifiers.

SPECIAL HI RES SOFTWARE

We have included three special pieces of software with the 7000 cartridge. These are located on the '7000 SYSTEM DISK'. They are:

X-10 HI RES EDITOR - Allows you to manipulate the HI RES image and add TEXT to create a customized ad or announcement.

X-11 PAGE PRINTER - Permits you to print copies of any standard or HI RES page on an EPSON or EPSON-compatible dot matrix printer.

X-12 HI RES IMPORTER - Lets you create HI RES graphics or PHOTO ADS using another drawing program or even a photo digitizer and 'import' these to your 7000 based system. This 'X' command does the conversion for several different graphic formats.

X-10 HI RES EDITOR

HI RES pages 41 through 48 are very different from standard pages (1 through 40) and therefore require a special editor to perform the kinds of tasks needed to create a finished display. The 'X-10' editor is only used in HI RES pages 41 through 48. You must load it from disk each time you want to edit any of these HI RES pages. Begin by loading the 'X-10' editor:

Press: 'ESC' - 'X' - '10' - 'RETURN'

X-10 HI RES EDITOR (cont'd)

This editor uses 'single' keystroke commands that are similar to the standard editor used with pages 1 through 40. For example, to set the Dwell time for a particular HI RES page, you simply press 'D' and enter the desired dwell time. It is not necessary to press the 'ESC' key first as you would normally do when in the standard page editor. The following is a description of the commands that you can use with HI RES pages.

D DWELL TIME. Sets the amount of time that a page will be displayed.
Select any time from 0 to 99 seconds.

F FORMAT. Select either FULL SCREEN or 4 REGION SCREEN. Changes each time you press the 'F' key.

G GRAPHIC mode. See the description below on the special use of the 'Arrow Keys' and color select keys.

L LOAD a HI RES page from disk. You can load the current HI RES page or another HI RES page from the disk.

SHIFT + L... LOAD ALL HI RES PAGES from Disk #2.

M MERGE another HI RES page into the current HI RES page.

O OVERLAY mode. Creates a screen that appears to have a 'PHOTO' overlaid on top of a HI RES graphic page. See the description below for more details on its use.

X-10 HI RES EDITOR (cont'd)

S SAVE a HI RES page to Disk #2

SHIFT + S... SAVE ALL HI RES PAGES to
Disk #2.

T TEXT mode. Causes the screen to
alternate or flicker between the current HI
RES page and Page 1. This allows you to
see the text on Page 1 and position it
before using the 'W' command. To turn
this mode OFF, press 'T' again.

W WRITE TEXT or graphics on Page 1 to
the current HI RES page. This is the way
you put text onto your HI RES pages.
First, prepare your message on Page 1,
then transfer it to the HI RES page by
pressing 'W'. If you make a mistake, you
can erase it by pressing 'W' again
immediately.

+ / - . . . Move to the NEXT HI RES page (+), or
to the PREVIOUS HI RES (-) page.
Same as in the standard editor.

SHIFT + CONTROL + CLEAR... CLEARS THE
SCREEN. Erases a graphic that was
previously on the screen. When used with a
page that had a 'PHOTO' OVERLAY, the
CLEAR command allows you to erase
portions of the screen.

BREAK EXIT from the X-10 editor and return to
the normal edit functions on pages 1
through 40.

GRAPHIC MODE KEYS

PRESS THE 'G' KEY FIRST. This sets the 'GRAPHIC' mode and allows you to use the following keystrokes:

CONTROL + ARROW KEY... MOVES ENTIRE HI RES PAGE Up, Down, Left or Right depending upon which 'Arrow Key' was pressed. As the graphic on the page is moved off of the screen, it is cut off or 'cropped'. This allows you to select the portion of a graphic that best suits your needs. By using the 'MERGE' command described earlier, you can combine several 'cropped' graphics into one!

COLOR KEYS... The following 'number' keys control the colors and intensities of various parts of the screen. First, press the number indicated, then use the 'arrow keys' (CONTROL + Arrow Key) to select the color. An UP arrow increases the brightness, while a LEFT or RIGHT arrow changes the Hue, Be sure to hold down the 'CONTROL' key while pressing the 'Arrow Key'.

1 INTENSITY of the Text and Graphics.

4 BORDER COLOR around the page.

5 BACKGROUND COLOR of the page.

0 BACKGROUND COLOR of 'PHOTO' overlays.

6,7,8,9.. Used in some graphics that can be 'imported' using the 'X-12' command. Experiment to determine which colors are associated with each number.

TEXT MODE KEYS

FIRST, PRESS THE 'T' KEY. This will cause the screen to flicker, showing not only the current HI RES page but also any text that may be on Page 1. To STOP the flickering, press 'T' again. This mode allows you to position a TEXT message on Page 1 so that it can be 'written' to the HI RES page with a 'W' command. Here is a list of keystrokes that can be used in the TEXT mode:

T TEXT mode. Cause screen to flicker, showing the current HI RES page combined with any text or graphics on page 1.

CONTROL + ARROW KEY... MOVES TEXT and graphics on Page 1 to the desired postion.

W WRITE Text and graphics on page 1 to the current HI RES page.

BREAK EXIT to the standard editor. If you hit 'BREAK' while the screen is flickering, you will be able to see the HI RES page as well as Page 1. Your cursor will be on Page 1 and you will be able to perform all of the normal editing functions. For example, you can create text and graphic messages, use the 'X-3' title fonts, and when you are ready, go back into the 'X-10 HI RES' editor by simply pressing 'ESC' 'X' 'RETURN'. Then, go to the desired HI RES page and press 'W' to transfer the contents of Page 1 onto the current HI RES page.

OVERLAY MODE KEYS

The 'OVERLAY' mode allows you to create HI RES pages that appear to have digitized PHOTOS 'overlayed' on top of the page.

Start by loading a digitized photo. This may be one that we did for you, or it may be one that you created yourself and converted into the proper format using the 'X-12' command. Then, 'crop' the photo to the desired size by using the 'Arrow Keys' in the Graphic mode (Press 'G' first). The 'cropped' photo must always have one edge along the right side of the screen. It can be any height and be positioned vertically anywhere on the screen. The width of the photo is limited to certain fixed increments that you can fine tune once you have selected the 'overlay' mode.

Once the photo has been 'cropped', Press 'O'. You will see that the area outside of the photo area has been cut away. Depending upon the width of the photo, you may see a dark area on the left side of the photo or you may see some funny looking specks that should be a part of the photo. Press the LEFT or RIGHT ARROW KEYS (while holding down the CONTROL key). The width of the PHOTO overlay area will change. Adjust the width until you get the best fit. If necessary, go back to the Graphic mode by pressing 'G' and crop the photo until you get the best fit.

The following is a list and description of the keystrokes you may use while in the 'OVERLAY' mode:

O OVERLAY mode. Creates a PHOTO overlay window and a HI RES graphic window around it.

CONTROL + UP or DOWN ARROW... Moves the BOTTOM EDGE of the photo window Up or Down depending upon the key that was pressed.

CONTROL + LEFT/RIGHT ARROWS... MOVES the LEFT EDGE of the photo window LEFT or RIGHT depending upon which key was pressed. The Right edge always remains against the Right edge of the screen. Due to limitations within the computer chip set itself, the LEFT EDGE moves in larger increments than does the bottom edge. So, you may have to adjust the width of the photo for best fit. Use the 'cropping' features of the Graphic mode described above.

CONTROL + CLEAR or INSERT... MOVES the TOP EDGE of the photo window UP or DOWN depending upon the key pressed.

SHIFT + CONTROL + CLEAR...
CLEAR SCREEN. Can be used to do some additional cropping. Select the photo window size using the keys described above. If the photo falls slightly outside the window into the graphic area, use this command and clear ONLY the GRAPHIC area. This crops the photo and allows the best fit.

X-11 PRINTING PAGES

The 'X-11' command allows you to print a series of pages on your Epson printer.

Press: **'ESC' - 'X' - '11' - 'RETURN'**

The computer will ask for a page list. Enter the pages that you want to print. For example, enter:

1-3 35 43

This will print pages 1, 2, 3, 35 and 43.

If your printer inserts line feeds automatically, you will get pages printed with extra spaces between the lines, i.e., letters and graphics will be chopped up. If you get this, you can reconfigure the '7000 SYSTEM DISK' as described in Section 2 of the manual.

If your Printer Stops for 30 seconds - Don't Worry! There is a bug in Atari's operating system that causes 'time-outs' occasionally. Unfortunately, there is nothing that can be done about this. You may run into this problem from time to time. After a brief pause, your printer will start again.

HARDWARE OPTIONS

For those who want to create their own 'Photo AD' graphics we suggest the **COMPUTER EYES** 8 bit digitizer and a suitable Black and White TV Camera. These are available from many computer dealers and distributors.

To use the X-11 **PRINT** command, you will need an Epson or Epson-compatible dot matrix printer and a printer interface. The printer interface converts the non-standard Atari serial bus into a standard Centronics Parallel port. These interfaces, manufactured by many companies, may be obtained at any Atari dealer or distributor.

To install the printer adapter, follow the manufacturers instructions. Plug the interface into the 13 pin I/O connector on the back of the disk drive. Connect the Centronics 36 pin connector to the back of the printer.

Contact **INFO/soft** or your local distributor if you need help finding a source for any of the above.

X-12 IMPORTING HI RES GRAPHICS

The 'X-12' command on the '7000 SYSTEM DISK' allows you to import graphics created on the 'COMPUTER EYES DIGITIZER'. This device is manufactured by DIGITAL VISION, Inc., 66 Eastern Ave., Dedham, MA 02026, telephone (617) 329-5400. This device and a Black and White TV camera will allow you to digitize a standard B/W photo or digitize drawings.

The 'X-12' command can then be used to import these onto a 7000 HI RES page.



SECTION 5. OPTIONS

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| TEMPERATURE DISPLAY..... | 5-5 |
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This section is reserved for the operating manuals of various options that are available for the INFO/soft display systems. We have however, included a brief description of some of these options. Please consult INFO/soft Technology, Inc. regarding price and availability. Many other options are planned, so be sure to consult us if you have any special requirements.

HIGH RESOLUTION HEADERS

This option allows the use of a graphic header of 320 x 24 pixels in the area normally used by the Upper Region. It allows the reproduction of a company logo or other design. This logo can be loaded from disk or permanently stored within the cartridge itself.

There is a one-time artwork and production fee for disk versions. For versions stored within the cartridge there is an additional per cartridge fee. Please contact INFO/soft Technology directly for a quotation.

RS-232 ELECTRONIC INTERFACE ADAPTER

The RV-2 Interface Adapter is used to connect an Atari computer to an RS-232 modem, such as the Hayes Smartmodem 300. This adapter converts the Atari's non-standard serial output signals to RS-232 standards.

PRINTER ADAPTER

This is a Hardware and Software package consisting of an electronic interface that attaches to an Epson or Epson compatible printer, and disk software that prints graphic or text pages.

Use this whenever you want to keep a 'hard copy' of the contents of your INFO/soft 3000 or INFO/soft 5000 system.

On the INFO/soft 7000, printer software is already included. All you need is a hardware interface to connect to the printer.

LIMITED ACCESS VERSIONS OF INFO/soft CARTRIDGES

INFO/soft cartridges are being used in the Hotel/Motel industry and in-house message systems. Often these are provided by a third party who uses the system for advertising purposes. What they use is a 'Limited Access' version of the standard INFO/soft 3000 and INFO/soft 5000 cartridges. These 'Limited Access' versions permit the Hotel/Motel operator access to 10 or 20 pages of the computer memory. The entire page memory is accessible remotely to the third party.

TEMPERATURE DISPLAY

This Low-Cost Temperature Adapter allows the display of the Current Temperature reading, as well as the High Temperature and Low Temperature for the day. The adapter comes complete with 50 feet of cable for convenient installation, plus special disk software.

Temperatures are displayed in sequence on the bottom region of the screen.

It is perfect for Cable TV systems, Hotels and Motels, Apartments or Condominiums.

VCR CONTROLLER — 6080

This is a Hardware and Software package consisting of a Universal VCR Controller and disk software. The controller is wired across a VCR's button controls or to the VCR's remote control unit. Or, it can plug into a VCR's remote control jack, if so equipped.

Our INFO/soft 6080 VCR Controller adds new flexibility to text and graphic information channels. With it you can control an ordinary VCR and create a completely automated program source that alternates between text/graphic displays from your INFO/soft 3000, 5000 or 7000 generator and video from the VCR! It's ideal for Cable TV, Private Cable, Hotels, and Hospitals!

MANY APPLICATIONS:

- VIDEO/COMMERCIAL INSERTION into cable TV L.O. Channels.
- BLACK-OUT Controller for Sporting Events.
- TAPE DELAY of Satellite Delivered Services.
- AUTOMATED VIDEO PROGRAM CHANNELS in Hotels & Hospitals.

MANY FEATURES:

- Controls PLAY, STOP, REWIND and RECORD functions.
- Auxiliary Control for PAUSE, PARK or SATELLITE RECEIVER control.
- Provides RELAY CONTACTS for control of functions.
- Built-in A/B stereo audio-video switch.
- Can be used with virtually ANY VCR: 3/4", VHS, BETA.
- DAISY CHAIN UP TO 15 CONTROLLERS for complete automation of L.O. Channels or for tape delay applications.
- FROM 48 TO OVER 300 EVENTS depending upon complexity.
- Program up to 30 days in advance.
- Program REMOTELY via telephone line if desired.
- Switches between INFO/soft Video Display and video tape on command.
- LED's show controller functions.
- SMALL SIZE (approximately 5 1/4" x 4" x 2") can be attached to back of many VCRs.

The 6080 VCR Controller option can be used with either INFO/soft 3000, 5000 or 7000 software cartridge, an Atari computer and disk drive. It is designed to control the essential functions (PLAY, STOP, REWIND, RECORD) of a single VCR. Because it uses relay contacts to control these functions, it can be wired into virtually any VCR whether it be a standard 3/4" tape deck, or a consumer-type VHS or BETA VCR.

Because it can be used with so many different VCRs, we cannot provide interfaces for a particular machine. But the 6080 VCR controller is simple to install. Just wire the 6080's cable across the VCR's control buttons—either inside the VCR itself, or on its remote control. This can be done in about 30 minutes by any qualified technician.

Our engineering staff has dubbed this 'the button pusher' because it can do virtually everything a human operator could do by pushing the VCR control buttons. In fact, programming the controller is just as simple. Here is a list of 'Functions' and 'Commands' that can be used:

FUNCTIONS:

Pn - Play VCR #n (where n = VCR #1 to #15)

Sn - Stop VCR #n

Wn - reWind VCR #n

Rn - Record VCR #n

An - Switch to source 'A' (usually the c.g.)

Bn - Switch to source 'B' (usually the VCR)

Xn/Yn - Aux. control #n

Csss - Continue after 'sss' seconds (1 to 120)

Ippp - display INFO/soft page #ppp (1 to 120)

10 - restart the INFO/soft display

COMMANDS:

Dnn - Day of month (where nn = 1 to 31)

T hh:mm:ss - Time to perform event
(hour:minute:second)

() - OR command

EXAMPLES:

For example, if you want to roll a video tape at 8 a.m., you might enter:

T8:00:00 P1 C8 B1

...meaning at 8 a.m. exactly (T8:00:00) start the tape by pressing the play button on VCR #1 (P1).

Continue after waiting 8 seconds to pre-roll the tape (C8), then switch to Source 'B' the VCR (B1). If you wanted to start a little earlier so that the actual cut to the VCR was at precisely 8 a.m., you could start the process at 7:59:52 by changing the time command to T7:59:52.

Let's do something slightly more complicated.

Suppose you want to run a 1½ hour local program on your L.O. channel at 8 p.m. on Halloween night and repeat it again at 10 p.m. The commands would look like this:

D31 (T20:00 T22:00) P1 C8 B1 Starts VCR

D31 (T21:30 T23:30) A1 S1 W1 IO Stops VCR

...meaning on the 31st (D31) at either 8 p.m. (20:00 hours in 24 hour time) OR 10 p.m. (T22:00) start by 'pressing' the Play button on VCR #1. Continue after waiting 8 seconds for pre-roll (C8), then switch from source 'A' - our INFO/soft Video Display System, to source 'B' - the VCR (B1).

The second line says: at either 9:30 p.m. (T21:30) OR 11:30 p.m. (T23:30) on the 31st (D31), switch to source 'A' - the INFO/soft character generator, then Stop VCR #1 (S1) and reWind it (W1). Finally, re-start the character generator (IO) to begin displaying pages again.

With a few extra commands, you can start and end the video tape presentation with a sponsor's advertisement on the character generator.

APPLICATIONS:

By 'stacking' additional 6080 VCR controllers, you can automate up to 15 VCRs. Your INFO/soft 3000, 5000 or 7000 will control them all!

For Hotels with Video Information channels, the 6080 VCR controller can extend the life of ordinary VCRs by reducing their on-time while providing an easily updated text and graphic information source on the INFO/soft character generator.

For Cable TV and Private Cable operators near big city sports franchises, the 6080 VCR controller and INFO/soft character generator can provide alternate programs during times of **MANDATORY BLACKOUT**. These blackouts can be programmed up to 30 days in advance, too!

For Tape Delay applications, the 6080 can record a program for later playback. You can use multiple 6080s all controlled by a single INFO/soft character generator. In such cases, you could actually use your INFO/soft character generator on a Local Origination channel, while providing tape delayed programming on a satellite service!

Hospitals and Hotels can use it for automated video programs, using the INFO/soft character generator during VCR rewind times or for extended announcements. This will greatly increase the useful lifetime of the VCR.

EQUIPMENT NEEDED:

The 6080 VCR controller operates with INFO/soft 3000, 5000 or 7000 software, and an Atari 800XL, 65XE or 130XE computer. *A disk drive is required.* Virtually any current technology VCR will work including most VHS, BETA and SUPER BETA models as well as standard 3/4" industrial machines. The controller can be wired directly into the VCR (across the control buttons), or to the Wired or Wireless remote control.

NETWORK CONTROL SOFTWARE

This software option is designed to send pages to hundreds of locations tens, hundreds or even thousands of miles apart! Automatically and Unattended! At any time during the day or night!

A user can designate an INFO/soft 5000 system at his office to be a 'Network Control Station' feeding pages to as many as 50 locations. He can also designate any other location, anywhere in the world, to serve another 50 locations, and so on.

For example, a corporate office in Chicago sets up a network of retail store locations in the Southeastern United States and another in the Western U.S. Each of these networks serves 45 locations or stores. Corporate designates an Atlanta and Los Angeles store as a 'Network Control Station' and downloads the appropriate software into their INFO/soft 5000 systems. Each day, the corporate office in Chicago uses their INFO/soft 5000 system to call both Atlanta and Los Angeles, sending them the appropriate page information to be delivered to the 45 stores in each network. Each 'Net Control Station' then initiates 45 separate calls starting at a selected time (usually after 11 p.m. when phone rates are lowest) and delivers the designated pages to each store! The 'Net Control Station' will try at least twice to establish contact with a store just in case the telephone line was busy or the call was terminated unexpectedly. Of course, pages are always delivered 'error free' because of our proprietary error-correction algorithm.

Additional 'New Control Stations' can be added, each able to communicate with 50 locations, until the network grows to hundreds or even thousands of locations!

In case of trouble, each 'Net Control Station' keeps a log of any trouble encountered which can be polled by corporate in Chicago the next morning to see that all of the messages were delivered.

Surprisingly, this software is very simple to use and is very low in cost! One disk does it all! It's perfect for existing businesses or for people wanting to start a new 'Information Delivery' service!

SECTION 6. APPENDIX

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COMPUTER EQUIPMENT VARIATIONS

INFO/soft cartridges are plugged into an Atari home computer. For the INFO/soft 5000, we recommend use of an Atari 130XE computer since it will provide a full 120 pages of memory. The INFO/soft 7000 MUST use the Atari 130XE computer or similar with at least 128K of memory.

| —COMPUTER— | # Pages | # Pages | # Pages |
|--------------|-------------------|-------------------|-------------------|
| | INFO/soft 7000 | INFO/soft 5000 | INFO/soft 3000 |
| Atari 130XE | 40 + 8 Hi-Res | 120 | 40 |
| Atari 65XE | n/a | 40 | 40 |
| Atari 800XL | n/a | 40 | 40 |
| Atari 1200XL | n/a | 40 | 40 |
| Atari 800 | n/a | 23 | 23 |

If disk storage is desired, use an Atari 1050 or XF-551 disk drive, or its equivalent. Many third party manufacturers make disk drives that are compatible with Atari computers. If you want to save and load more than 40 pages, you may want to use two drives. In almost all cases though, you will not need any disk drives at the remote location.

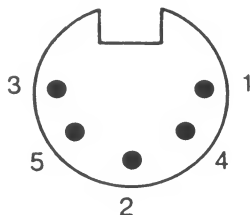
COMPOSITE VIDEO OUTPUT

Video output is available from Atari's 'MONITOR' jack. Use a good quality D.I.N. - 5 pin connector and 75 ohm coax between the computer and the channel modulator. Use pins 2 and 4 for composite video as shown in the diagram below.

We have run video lines as long as 800 feet using RG/6 instead of RG/59 without any additional video amps in the line with good results. For longer runs, use larger cable or additional video amps. Consult your cable TV supplier for the appropriate hardware.

MONITOR JACK

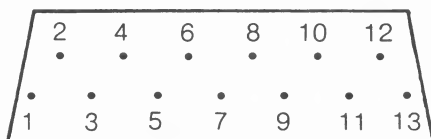
(View from solder end)



1. Composite Luminance
2. Ground
3. Audio Output
4. Composite Video
5. Composite Chroma

INTERNAL VIDEO MODULATOR

If you are using the built-in R.F. Modulator, you may apply external audio to the modulator by connecting low-level audio to the 'Peripheral' connector on the computer as shown below. The internal modulator provides an output level of approximately 2 dBmv. This can be amplified and combined with other signals on a cable. For best results, a high quality cable modulator is preferred. However, there will be applications where the internal video modulator will provide adequate service.



Pin 11 - Audio Input

Pin 6 - Ground

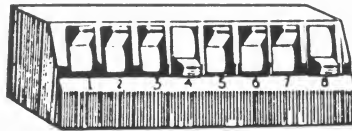
MODEMS

We stongly recommend the HAYES SMARTMODEM 300. This is a very reliable unit with an excellent reputation and warranty. INFO/soft cartridges are set up to work with this modem with no additional changes.

We can also recommend the AVATEX 1200HC modem. It provides 300 or 1200 baud operation and has proven to be very reliable and is relatively low in cost.

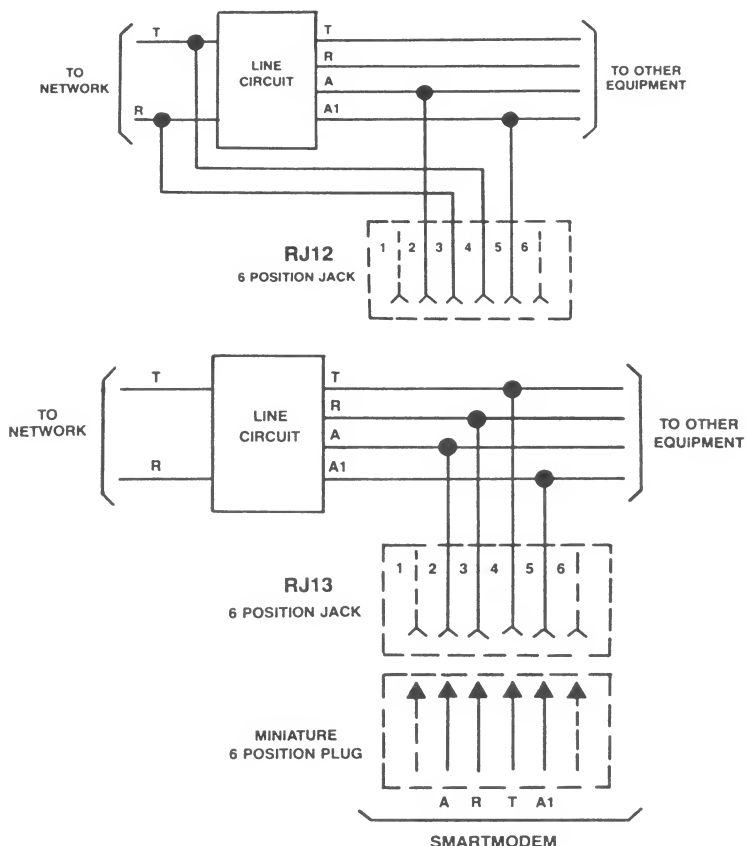
HAYES MODEM CONFIGURATION SWITCHES

The Hayes Smartmodem 300 has an 8 position switch located behind its front panel which must be changed prior to use. Remove the front panel. Refer to the illustration below and set all of the switches to their UP positions, EXCEPT switch 4 and 8 which should be OFF. Then, replace the front panel.



USING HAYES MODEMS ON MULTI-LINE TELEPHONES

You can connect a Hayes modem to work with Multi-Line Key Set telephone installations. In this case, Configuration Switch 7 is set to the Down Position. When the modem goes 'Off Hook', i.e. 'picks up the phone', the lamp on the telephone instrument will light. The figures below show how the modem is connected using RJ-12 and RJ-13 Modular Phone jacks.



DEFEATING AUTO-ANSWER

If you are using your Hayes Smartmodem 300 in your office and do not want the modem to answer incoming calls, set switch 5 DOWN. This defeats its Auto-Answering feature.

INSTALLING THE RS-232 CABLE

IF YOU ARE USING A HAYES SMARTMODEM 300, PLUG IN THE OPTIONAL RS-232 ADAPTER CABLE INTO THE 13 PIN CONNECTOR ON YOUR ATARI COMPUTER OR DISK DRIVE AND THEN INTO YOUR MODEM.

If you are using another modem, the signals and pinouts at the DB-25 connector are listed in the diagram below. Make sure that the needed signals from your modem appear on the right pins. If they do not, rewire the connector ON YOUR MODEM. It is not possible to rewire the RS-232 cable supplied, since there is a printed circuit board and several components within the connector itself.

| PIN | —SIGNAL— | REMARKS |
|-----|---------------------|------------|
| 2 | Transmitted Data | To Modem |
| 3 | Received Data | From Modem |
| 7 | Ground | |
| 8 | Carrier Detect | From Modem |
| 20 | Data Terminal Ready | To Modem |

USEFUL HAYES COMMANDS

There are several useful commands that can be used with your HAYES or HAYES-compatible modem. Most of these are already described in Section 3 — Operation, and summarized here for your convenience.

P — Telephone numbers following should be PULSE DIALED.

EXAMPLE: P 206-638-2670

T — Telephone numbers following should be TONE DIALED.

EXAMPLE T 206-638-2670

, (Comma) — Causes a two second delay in dialing.

EXAMPLE: 9,206-638-2670

C AT SO=n — Causes the modem to automatically answer after 'n' rings (n = 1 to 5)

EXAMPLE: C AT SO=3

C A/ — Redials the last number dialed.

C S11=nn — Sets the touch tone duration and dialing speed. Normally, nn = 70 milliseconds. However, if this is too fast for the particular telephone system that you are using, you can change the value by making nn greater than 70.

EXAMPLE: C S11=90

C AT S7=nn — Sets the modem to wait longer than 60 seconds for a remote site to answer.

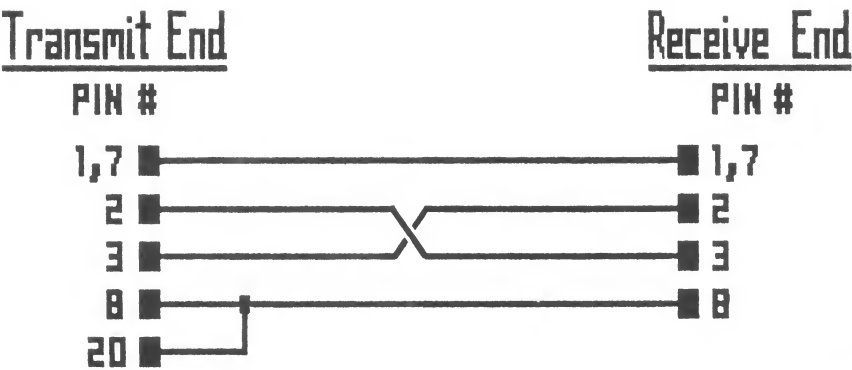
MULTI-CHANNEL OR WIRE OPERATION

INFO/soft cartridges can be used without a modem. In applications where the headend is located close by, and where it is feasible to run a 4-wire cable, no modem would be required. Simply wire a length of 4 conductor cable as shown in the diagram below.

For longer cable runs, it is recommended that shielded cable be used to reduce noise.

For multi-channel operation, one INFO/soft system can be used as an off-line editor. One or more additional INFO/soft systems can be interconnected via 4 wire lines to the central editor. Switching of these 4 wire lines can be accomplished with a standard 4 pole switch, or done manually by inserting and removing the cables.

You will need two RV-2 interfaces, one for each computer.



RV-2 Interface Adapter

CONTROL PORT CONNECTIONS

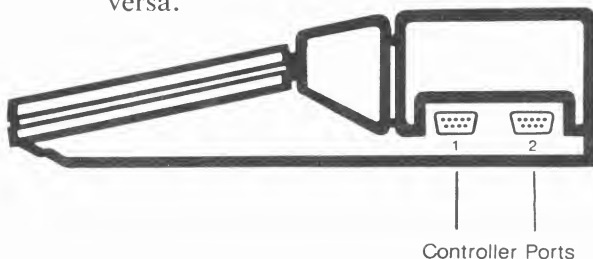
Controller port #1 on the computer may be used to control several important functions within the cartridge. In some cases, it significantly expands the usefulness of the product in special applications. Below, you will find a brief explanation of the control lines that are available.

| PIN # | ----- | PURPOSE----- |
|-------|-------|--------------|
|-------|-------|--------------|

- 1 EXTERNAL CONTROL LINE:** This pin goes to a logic LOW (0 VDC) whenever page 120 (or page 40 on an Atari 800XL) is displayed. This can be used to trigger an external device. Not available on the INFO/soft 7000.

On the INFO/soft 7000, a jumper between pin 1 and pin 8 (ground) puts the computer into a 120 page mode. This is used only when you are using a 7000 at a remote location (no disk drive) and want to use a full 120 pages.

- 2 BLACK SCREEN:** Bringing this line to ground causes the video screen to go to black. This line is used in Ad Insertion applications to allow clean switching from satellite video to cartridge video and vice versa.



3 PAUSE: Bringing this line to ground (LOW) will cause the page display to pause. It will remain in a pause mode until the line goes high again. Page dwell time will be 'frozen' as long as it remains in the pause mode. When it resumes normal operation, the page will finish displaying for the remainder of its allotted dwell time.

4 STEP: When in the PAUSE mode, bringing this line to ground (LOW) momentarily causes the page to advance to the next numerical page. If that page is blank, it will advance to the next filled page. Be sure that the input of this line is free of 'bounce' caused by poor switch contact closure.

5 1200 BAUD MODEM SELECTION:
On powerup, the cartridge sets a 'default' modem speed of 300 baud. To change this default value to 1200 baud, run a jumper between pins 5 and 7.

2400 BAUD MODEM SELECTION:
(INFO/soft 7000 ONLY)

On powerup, the cartridge defaults to 1200 baud. To change this default to 300 baud, jumper pins 5 and 7 on controller port 1.

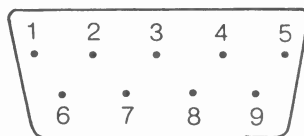
To change this default to 2400 baud, connect a 270K resistor between pins 5 and 7. The resistor may be any wattage or tolerance.

- 6 **RESTORE:** Bringing this line to ground (LOW) will restore the display to the first page in sequence. The display will start as soon as the line is brought HIGH (+ 5 V) again.
- 7 + 5 VDC (50 mA maximum)
- 8 **GROUND**
- 9 **BOTTOM REGION DISPLAY:** Allows choice of either TIME ONLY display for the Bottom region, or MESSAGE ONLY display instead of the alternating format normally used.

FOR MESSAGE ONLY DISPLAY:
Place a jumper between Pin 9 and Pin 7.

FOR TIME ONLY DISPLAY: Place a 270K resistor between Pins 7 and 9. The resistor may be any wattage value from 1/8 watt or greater.

NOTE: PORT 2 IS NOT USED AT THIS TIME. IT IS RESERVED FOR FUTURE EXPANSION.



CONTROLLER PORT

MEMORY PROTECTION

Pages are stored in volatile RAM memory. If power fails these pages will be lost. However, there are two ways to save memory. The first method uses Disk Drive storage as a backup. If power fails, the disk automatically reloads and restarts the display. NOTE that the System Disk must be configured for this option (See SECTION II. SET UP for details). While there will be no loss in memory, the time will be incorrect and could affect operation if page scheduling is being used.

The second method allows you to add an external BATTERY BACKUP which keeps the computer FULLY OPERATIONAL for a period from 1/2 hour to several hours. You may use a standard Uninterruptable Power Supply or construct your own battery backup. A simple, low cost design is given below.

BUILDING A SIMPLE BATTERY BACKUP

Using ordinary components readily available at Radio Shack stores, you can construct a low cost battery backup for your Atari 800XL, 65XE or 130XE microcomputer. These models operate with a single 5VDC supply, The circuit is shown in the figure below, together with a list of components and their Radio Shack part numbers.

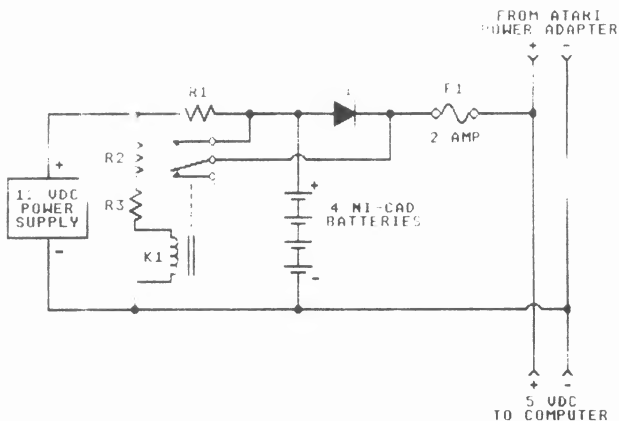
A set of 4 Ni-Cad batteries, rated at 1.1 Amp-Hours can be expected to provide a minimum of 1 hour of operation when fully charged. This circuit provides taper charge sufficient to recharge the batteries in 24 hours. A small trickle charge is provided to keep the cells completely charged.

In the event of a power failure, the batteries will take over immediately, discharging through the blocking diode. Within a few tens of milliseconds, relay K1 will de-energize and close the contacts across the diode. This is done to eliminate the 0.7 to 0.8 volt drop normally experienced with blocking diodes, and thus extend the length of operation. The computer itself will operate down to about 3.75 volts. The only change that you will notice is the varying of the screen colors as the voltage level drops. However, memory and normal operation will continue until the voltage level drops below approximately 3.75 volts.

When power returns, the batteries will begin to recharge; and K1 will place the blocking diode back into the circuit.

Note that Ni-Cad batteries lose capacity when they sit on a shelf. Therefore, newly purchased batteries are never fully charged, and in some cases may be nearly discharged when you first obtain them. It is best to let these batteries DISCHARGE completely before recharging them. Discharging the cell first breaks down oxide that forms on the cadmium electrode and ensures that the cell can be fully recharged.

If larger Ni-Cad batteries are used, you can increase the charging current by changing R1 to 50 ohms. Be sure you protect your equipment by using the appropriate fuses.



RADIO SHACK PARTS LIST

| | |
|-------------|--|
| T1 — | DC Adapter, 12 VDC 500 mA (R.S. #273-1652) |
| R1 — | 100 OHM, 10 WATT (R.S.-#271-135) |
| R2, R3 — | 100 OHM 1/2 WATT (R.S.-#271-012) |
| D1 — | 1N5400 Diode, or equiv., 3 Amp, 50 PIV (R.S. #276-1141) |
| K1 — | SPDT 5VDC Relay, 2 Amp Contacts (R.S. #275-243) |
| F1 — | Fuse Clips (R.S. #270-739) 2 Amp Fuses (R.S. #270-1275) |
| CASE — | Place in appropriate case, such as R.S. #270-222. |
| BATTERIES — | Rechargeable Nickel Cadmium 1.1 Amp Hour rating (R.S. #23-124) |
| MISC — | Circuit Board, R.S. #276-150 |

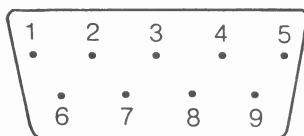
Approximate Cost of the Above: \$40.00 U.S.

CONTROLLING EXTERNAL DEVICES

In some applications, it may be desirable to use your INFO/soft 3000 or 5000 to control an external device. We have provided a special control line for this purpose on Pin #1 of Control Port 1 located on the side of the Atari computer. This pin, normally set to a logic HIGH (+ 5 VDC), goes LOW (0 Volts) each time page 120 (or, page 40 on a 40 page system) is displayed. Thus, by displaying page 120 in the sequence, you also send a signal out on the control line. This signal, in turn, is used to control external logic or relay.

Page 120 can be set to display in increments from 1/4 second to over 2 1/2 hours!

CONTROLLER PORT



THE WEATHER CHANNEL

Services like the 'Weather Channel' provide a cable operator with a set of contacts that close when it is time for a local commercial or message. You can easily hook up your INFO/soft system to display ads or other messages during this time. Simply connect your system as shown below. Each time there is a 'commercial' spot, the INFO/soft display will 'turn on' and begin page display. When the commercial time is over, the INFO/soft display will 'turn off' and wait until the next commercial time. It will then pick up again at the next page in the sequence.

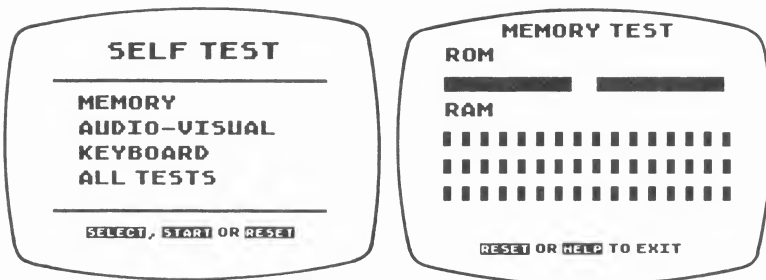
COMPUTER TROUBLESHOOTING

The Atari 'XE' and 'XL' computers have a self-test feature that is helpful in isolating troubles. Start the tests by first turning 'OFF' power to the computer. REMOVE the INFO/soft cartridge. Then, while holding DOWN the 'OPTION' key, turn ON the computer. A 'Self-Test' menu will appear on the screen. Press 'SELECT' to choose a test, then press 'START'. Press 'HELP' to return to the self-test menu.

Use the 'Memory Test' to check the RAM portions of the computer. A Green indicator means that everything is OK. RED means a chip has failed.

Use the 'Keyboard Test' to check the keyboard for proper operation.

Please note that while this SELF-TEST feature is useful in determining hardware failures, it is, unfortunately, not totally conclusive. If the computer passes these tests, it may still have a hardware problem. This is due to the fact that not all of the major components are tested. And, only 64K of memory on a 130XE is tested.



INFO/soft 3000, 5000 and 7000 SPECIFICATIONS

VERSIONS

INFO/soft 7000: 40 PAGES TEXT, Graphics;
8 PAGES HI RES

INFO/soft 5000: 120 PAGES, Extensive Graphics

INFO/soft 3000: 40 PAGES, Text Only - NO
GRAPHICS

PAGE MEMORY

Page Memory specified above is independent of page size. (Multiple units can be daisy-chained for even greater page capacity).

DISK STORAGE

If desired, memory can be backed up on one or two low cost 5 1/4" floppy disk drives. Automatically reloads and restarts display if a power failure occurs.

VIDEO STANDARDS

NTSC, PAL, SECAM automatically selected depending on the type of Atari computer used.

HELP SCREEN

Instantly available by pressing one key. Provides a quick reference for inexperienced operator.

MULTILINGUAL CAPABILITY

'Help Screen' and 'Prompts' provided in Five languages: English, Spanish, French, German, and Swedish. Other languages available on request.

REGIONS

Four. Completely programmable by user.

OPTIONAL HIGH RESOLUTION HEADER

Provisions are made to load a high resolution Logo or design into the Upper region of the screen. Logos can be loaded from disk or burned into the cartridge. Available on special order.

FORMATS

NTSC:

16 Lines x 40 Char.

16 Lines x 20 Char.

8 Lines x 20 Char.

20 Lines x 40 Char.

PAL/SECAM:

20 Lines x 40 Char.

20 Lines x 40 Char.

10 Lines x 20 Char.

Full Page Format
(NTSC-PAL-SECAN)

COLORS

128 Background/Text. Up to 8 colors per screen.

CRAWL

640 characters of crawl memory! (800 on the 7000)

CLOCK/CALENDAR

Quartz-controlled, initial accuracy typically ± 10 seconds/month. Adjustable to ± 2

seconds/month or better. Clock can be displayed in either 12 or 24 hour format. Date is displayed in either MONTH-DAY-YEAR or DAY-MONTH-YEAR format.

CHARACTERS

Upper/Lower case and International characters displayable in normal and inverse video. INFO/ soft 5000/7000 have Five character sets with OVER 480 graphic characters! INFO/soft 3000 has Two character sets — text only.

CHARACTER SIZES/STYLES

INFO/soft 5000/7000: sizes equivalent to 14, 24, 28, 40, 56 and 64 Interlaced TV Scan Lines. Several sizes per page allowed, depending on page format. Styles include Standard Font in Large, Medium and Small text sizes; Teletext, Serif, Mosaic, Data Processing, and Script-like styles included in 'Titling Fonts'.

INFO/soft 3000: sizes equivalent to 14 and 24 Interlaced TV Scan Lines. Up to two different sizes per page.

CHARACTER FLASH

On 20-Character Screen Formats.

GRAPHIC FEATURES (INFO/soft 5000/7000)

Over 480 graphic symbols included in 5 character sets. Plus, Optional Graphic Library diskettes with hundreds of designs.

FULL EDIT CONTROL

- Full Cursor Positioning
- Automatic Line Centering
- Line Insert and Delete
- Character Insert & Delete
- Graphic Keys
- Inverse Video Control
- Time Set
- Dwell Time Select
- Save/Load Pages
- Remote Send
- Modem Speed 300/1200 Baud
- Page Duplication
- Tabs
- Page Erase
- Font Select
- Color Select
- Character Flash
- Region Select
- Clock Mode Select
- Format Selection
- Page Forward
- Sequence Control
- Start Display
- Display Preview

DWELL TIME/ANIMATION

Variable 0-99 seconds in one second increments, up to 2 1/2 hours in larger increments. Each page can be set independently of another. 1/4 Second Animation.

SEQUENCING

Random or Sequential Page Display. Blank pages are skipped automatically.

DISPLAY PREVIEW/ARCHIVING

Provides a quick preview of pages to be displayed in the appropriate sequence. Allows operator to verify that all pages are in their correct sequence before beginning normal display. Each page is displayed for 1 second regardless of its normal dwell time. Also allows operator to archive displays on video tape for future reference. (A single 2 hour tape typically stores 120 to 180 days of information!)

PAGE SCHEDULING

Pages can be preset to turn 'ON' or 'OFF' at specified times (within 1 minute) up to 30 days in advance!

REMOTE INTERFACE

RS-232 Interface compatible with most 300 and 1200 Baud modems. Requires low-cost electronic interface. INFO/soft 7000 may also use 2400 baud speed.

REMOTE TRANSMISSION TIME

Depending on the page format and length, transmission varies from as little as 1 second to a maximum of 22 seconds per page at 300 baud. Pages and regions can be sent individually or in a batch mode.

ERROR CORRECTION

Proprietary Error-Correction algorithm assures perfect transmission of memory from master to remote site. Remote Viewing feature shows pages as they are received at the remote site!

REMOTE RECALL

The user can call the remote site and reload all of the memory from the remote to the master location!

DIRECTORY DIALER

Allows user to store up to 32 telephone numbers and access codes of remote locations for easy dialing.

MULTICHANNEL CAPABILITY

Two or more Remote units can be interconnected to form multichannel systems with FULL OFF-LINE EDITING capabilities.

EXTERNAL CONTROL LINES

Provided for control of external VCR, commercial insertion, interactive control, modem speed, and misc display functions.

TIME SYNCHRONIZATION

Control line provided to synchronize page display with an external signal, such as a time clock. Used in 'Electronic Newspaper' applications to begin page display at the top of the hour so that special 'features', e.g. classifieds, occur at specific times during the hour.

COMMERCIAL INSERTION

Can be controlled by an external Cue-Tone Decoder/Switcher for insertion of graphic/text ads into the local advertising availabilities provided by satellite programmers.

VOICE-OVER AUDIO FOR COMMERCIALS

Control of page display can be synchronized to an external audio source such as an audio cassette player. Useful as a VCR replacement in commercial insertion systems. Requires Low Cost DTMF interface.

DISPLAY COUNTER

Provides a count of the number of completed page sequences. Used to verify advertising frequency. Accessable locally or remotely.

VCR CONTROL

Available as an option. Allows video tape program to be inserted into character generator channel at a designated time. Provides full control of VCR functions.

TEMPERATURE DISPLAY

Optional, Low-Cost Temperature probe and software displays current temperature, plus the high and low temperatures for the day.

VIDEO OUTPUT/VIDEO STABILITY

Automatically provides NTSC, PAL, or SECAM video depending upon the type of Atari computer used (available in NTSC, PAL-I, PAL-B, and SECAM versions). One Volt p-p into 75 ohms. (Not available on Atari 400 or 600XL). Excellent Video stability — No Jitter, No Edge Crawl.

DISPLAY AREA

Contained within 80% SMPTE recommended safe title area to allow for overscanned TV sets.

R.F. MODULATOR

Built In — Channel 2 or 3 (NTSC models).
Approximately +2 dBmV output. External Audio
can be applied for background music.

POWER REQUIREMENTS/ BATTERY BACKUP

Entire computer operates on 5 Volts D.C. at
approximately 800 mA. (4 Watts Total). Can be
operated for extended time by external battery pack.

POWER FAILURE PROTECTION

Computer memory may be protected from power
failure by providing a simple battery backup, or by
using a disk drive. On restoration of power, units
equipped with a disk drive will automatically reload
and resume operation.

COMPUTER SELF-TEST DIAGNOSTICS

Atari 130XE and 800XL have built-in diagnostic
programs to pinpoint internal hardware failures.

RELIABILITY

Observed reliability indicates computer MTBF of
greater than 30,000 hours continuous operation.
Software cartridge MTBF calculated at greater than
150,000 hours according to semiconductor
manufacturer.

WARRANTY

One Year Limited Warranty on Software. 90 Days
on Hardware Options. 10 Day Money Back
Guarantee if not pleased!

COMPUTERS

Works on Atari 8-bit computers including 800, 800XL, 1200XL, and 130XE models. Specifications shown are for 130XE model. Other models will provide fewer pages of memory. 7000 requires 130XE or computer with 128K of memory.

RECOMMENDED CONFIGURATION

Atari 130XE Computer, and a minimum of one disk drive such as an Atari 1050 or equivalent. One drive will store 40 pages of memory plus many extra features. When using the INFO/soft 5000/7000, you can add a second drive to save another 80 pages of memory. (120 pages total).

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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INFO/soft PRODUCTS!**

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